AGENDA

COMMITTEE ON EDUCATIONAL POLICY

Meeting: **8:30 a.m., Tuesday, May 20, 2015**
Glenn S. Dumke Auditorium

Debra S. Farar, Chair
Margaret Fortune, Vice Chair
Talar Alexanian
Rebecca D. Eisen
Douglas Faigin
Lupe C. Garcia
Steven M. Glazer
Lillian Kimbell
J. Lawrence Norton
Steven G. Stepanek

Consent Items
Approval of Minutes of Meeting of March 24, 2015

Discussion
1. Cal State Online Initiative: Update, *Information*
2. Academic Efficiencies and Effectiveness, *Information*

Trustee Farar called the meeting to order.

Approval of Minutes

The minutes of January 27, 2015, were approved as submitted.

Academic Planning

Christine Mallon, assistant vice chancellor for academic programs and faculty development, presented the annual report on academic planning for board approval. The report addressed proposed projections for programs that could be started in the next 10 years, summaries of Western Association of Schools and Colleges (WASC) accreditations of which there were none to report this year, assessments conducted as part of regular 5-year program reviews, and a listing of accredited programs.

Twenty-nine new degree program projections have been proposed for trustee planning authorization, just four more than last year and still fewer than before the economic downturn. Dr. Mallon said the ratio of undergraduate to graduate projections was nearly equal this year, reflecting a continuing trend of increasing graduate program offerings as the system matures and as the workforce is expected to have a more specialized, advanced education.

There continued to be increased activity in STEM fields, with 14 STEM projections proposed in programs that will prepare students for some of the most in-demand and highest paying jobs in California, she said. There were 17 programs proposed for discontinuation and removal from the Academic Master Plan and 39 programs have suspended new admissions. Dr. Mallon noted that this may be temporary, or the suspension may be followed by permanent discontinuation. She added that students already enrolled in a suspended or discontinued program are allowed to finish their degrees, but new students will no longer be allowed to declare those majors. When all students have graduated or moved out of that program, the program status then becomes "obsolete."

Dr. Mallon recognized the years of work by dedicated faculty and administrators that have resulted in bringing down the total units required for CSU bachelor's programs, with 94 percent of all CSU BA and BS degrees now requiring no more than 120 units for semester campuses and 180 units for quarter campuses. Additionally, seven CSU campuses (Bakersfield, Channel Islands, Humboldt, Monterey Bay, San José, San Marcos, and Stanislaus) have successfully reduced all bachelor's degrees to require no more than 120 semester or 180 quarter units. In addition to this information, Dr. Mallon noted that the annual report provided to the board in the written agenda item includes an extensive report on assessment activities related to regular, cyclical program review. The program assessment involves faculty measuring how well students achieved the learning goals identified for a degree program and faculty then use that information to make improvements to the curriculum and teaching ensuring improved quality over time. A list of professionally accredited schools, colleges, departments, and degree programs in the CSU is also reported to the board which reflects that the programs meet high, rigorous standards set by national accrediting bodies.

Trustee Morales requested further details regarding the nature of programs not approved by the chancellor and inquired about the criteria for this process. Dr. Mallon said that the Chancellor's Office follows standard criteria ensuring that the curriculum is appropriately rigorous and coherent, has appropriate resources including faculty research and has a demand from society to ensure jobs for this occupation.

Trustee Eisen said that in a number or meetings ago a sustainability policy was enacted that contained a component asking for sustainability principles to be a part of curriculum. She is referring to issues such as climate change and energy conservation. She inquired about how this was implemented as new programs develop. Dr. Mallon stated that the Chancellor's Office does not direct content or require development in certain areas. Interested campuses bring the issues forward and ask that it be subjected to the evaluation. Interest in STEM and sustainability have both grown over the past few years, not just in degree programs but also in concentrations. Trustee Faigin asked about the financial impact of program discontinuance versus program approvals. Dr. Mallon stated that decisions about cost are calculated by individual campuses and their presidents.

The committee recommend approval of the proposed resolution. **(REP 03-15-01)**

The California State University Institute for Palliative Care at California State University San Marcos

Trustee Roberta Achtenberg introduced the information item providing context of the need for palliative care. She noted a World Health Organization and California HealthCare Foundation study that predicts 50 percent of the developed world will be chronically ill by 2050. In California, 46 percent of the population has at least one chronic condition, a number that is rising. With all of these increases, it has been projected that California will need an additional one million allied health care workers, doctors and nurses. She stated given this context the need for an Institute for Palliative Care was validated and has been working with California State University San Marcos (CSUSM) President Karen Haynes since fall 2012.

President Karen Haynes and Helen McNeal, Executive Director of the Institute, provided an update on the progress to date. Since the Institute launched in 2012, 17 online programs were introduced to educate current professionals. To educate both future professionals as well as other students at Cal State San Marcos, palliative care curriculum has been integrated into 29 courses. Many of these are in nursing but others are in social work, psychology, health information technology, sociology, Spanish, communicative and speech disorders and kinesiology. An additional Palliative Care Interprofessional Experience was created with faculty across disciplines to help better prepare students for interprofessional practice. Ms. McNeal added community outreach and education is key and the institute has successfully instituted 9 community programs, a comprehensive online web portal, and the "Caring at a Distance" online program. With all these efforts, they have been able to reach and educate 828 current professionals, 870 future professionals, and nearly 2,000 community members. The Institute has recently partnered with six additional CSU campuses including San Francisco, Los Angeles, Fresno, Fullerton, East Bay and Long Beach. Ms. McNeal said the Institute successfully reached many milestones that will help ensure the future sustainability and growth of their work that included completing a three-year strategic plan, establishing a national advisory board, hosting the first annual CSU Palliative Care Symposium, establishing critical state and national partnerships, and ensuring sound fiscal management. The next steps include adding 30 additional online and face-to-face programs, further supporting current campus partnerships, and expanding collaboration with three additional CSU campuses by 2015-2016.

President Haynes recognized Trustee Achtenberg who realized the importance of palliative care early on and championed the creation of the CSU Institute for Palliative Care. Because of her efforts, the CSU Institute for Palliative Care is recognized as a national model and leader in palliative care workforce and community development. Trustee Achtenberg applauded the efforts of all those involved stating the institute came in on budget and is on the verge of being self-sustaining. Trustee Faigin asked for an example of what palliative care would be like for a member of the medical field as opposed to non-palliative care. Executive Director Helen

McNeal stated that palliative care is a holistic approach taking into consideration all the needs of the patient and family members, not just their medical needs.

The Early Start Program and Academic Preparation Update

Executive Vice Chancellor Ephraim Smith introduced the item stating the goals of Early Start when the program was envisioned and adopted by the board in 2009 and officially launched in 2012 was to provide students with an opportunity to become more fully prepared for college-level work in English and mathematics in the summer prior to the start of their first semester of college. Dr. Ed Sullivan, assistant vice chancellor for academic research and resources, presented the update noting the CSU had the largest entering freshmen class in fall 2014, with 54 percent entering college-ready in both English and math. He added that summer 2014 Early Start marked the first time the program was required for all students needing additional college-level preparation in English and/or math. As a result, 59 percent of the Early Start summer 2014 cohort were college ready in both English and math at fall entry. He added this was a five percentage point improvement between high school graduation and fall entry. In the initial two years of Early Start, the improvement between high school graduation and fall entry was 2 and 3 percentage points.

Dr. Sullivan added that since the adoption of Early Start, students have shown improvement in needing additional preparation in only one subject as opposed to both and it is anticipated that 85 percent of these students will meet their preparation requirements by the end of spring term 2015. Students have the opportunity to participate in Early Start through various course offerings, including 1 semester unit (15 hour) introductory courses, 1-2 unit course for those near proficiency, and 3-4 unit courses for those needing more preparation. The majority of Early Start students (87 percent in English and 65 in percent math) enrolled in 15 hour (or 1 semester unit) introductory courses in summer 2014. He concluded by emphasizing that over the past five years, the CSU's entering freshmen classes have continued to increase in size and have come better prepared in college-level English and mathematics from high school graduation. The initial data reveals the Early Start program is successfully providing the additional preparation originally envisioned by the board. As campuses and their faculty continue to learn from Early Start and best practices emerge, it is expected the proficiency rates of entering CSU freshmen in both English and mathematics will continue to improve.

Student Trustee Talar Alexanian asked how online or hybrid courses play a roll with these types of courses as well as how many are offered in this form and if it has hindered student success. Dr. Sullivan did not have exact numbers on hand, but offered to get them for her at a later date. He stated that most of the one-unit courses will be offered online.

Trustee Rebecca Eisen wanted to know what assessment instruments are used to determine placement in Early Start mathematics and/or English. Dr. Sullivan stated that there are a variety of assessment tools. He specifically mentioned the EAP exam which is given in the junior year

of high school, SAT/ACT scores and AP exam thresholds. If all of these are not met, there is also the entry level proficiency exams in math and English.

The California State University Graduation Initiative 2025

Dr. Smith introduced the item reporting the first phase of the Graduation Initiative will commence with graduates this spring and a complete progress report, including final numbers, would be presented to the board in the fall. Ken O'Donnell, senior director for student engagement and academic initiatives and partnerships, provided the update on the targets for the Graduation Initiative 2025 that were discussed in the chancellor's January 2015 State of the CSU address. Mr. O'Donnell provided a brief overview of how graduation rates are calculated through the national Integrated Postsecondary Education Data System (IPEDS) reporting conventions. IPEDS generally uses three metrics including whether a student graduated in four or six years, or not at all. He stated that while these are the conventional reporting metrics used nationally, they can be misleading and that on average CSU students' time-to-degree is approximately 4.7 years. He broke down the initial Graduation Initiative 2009 cohort by ethnicity and presented a graph that showed that under-represented minority (URM) students tended to graduate within the five to six year time frame, though still many others graduated within ten years, but for IPEDS reporting purposes are not calculated. This served to illustrate where the next phase of the Initiative can help to move the bar in terms of time-to-degree with all students, but especially URM students.

Mr. O'Donnell outlined the six metrics for the next phase which included the initial targets to improve the six-year graduation rates from 51 to 60 percent and close the achievement gap by half from 14 to 7 points. The 2025 Graduation Initiative targets also added four new metrics: improving the four-year graduation rate from 16 to 24 percent, reducing the achievement gap based on Pell (socioeconomic status) from 11 to 5 points, and addressing transfer student success with focus on improving the two- and four-year transfer graduation rates to 35 percent and 76 percent respectively.

Trustee Brewer inquired if the 70,000 number of graduates expected, that had been reported in previous Graduation Initiative updates, is based on the 3 percent enrollment growth projected as a system or the 1 percent guaranteed by the governor's budget. Mr. O'Donnell confirmed that it is based on the governor's 1 percent enrollment growth.

Trustee Farar adjourned the Committee on Educational Policy.

COMMITTEE ON EDUCATIONAL POLICY

Cal State Online Initiative: Update

Presentation By

Gerry Hanley
Assistant Vice Chancellor
Academic Technology Services

Background

Prior to Cal State Online, a number of California State University (CSU) campuses have been successfully delivering distance education programs and online degree programs for years. For more than 35 years, CSU Chico has provided customized distance education services to corporations, government agencies and individual clients. CSU Chico initiated the world's first satellite-delivered master's program in computer science and continues its leadership with online degree and certificate programs based on live internet-based video direct to the desktop.

Phase I: Cal State Online

In 2011, the Chancellor's Office pursued a consolidation strategy for online degree programs by standardizing the technology platform, program schedules, business models, and program fees. Cal State Online was established in January 2012. After two and a half years, only seven online degree programs at four campuses were participating in Cal State Online, while the number of fully online degree programs with different concentrations offered by CSU campuses exceeded 110. In July 2014, the Chancellor's Office reorganized the program and re-visioned a design for the Cal State Online Initiative.

Phase II: Cal State Online Initiative

Re-visioning Cal State Online began with the recognition of the exceptional capacity for online education already existing on CSU campuses and asking campuses what they needed to accelerate their growth and improve the quality of their programs. After consultation with every CSU campus and establishing transparent and regular communications with campuses through their Cal State Online Campus Coordinators, Cal State Online is re-emerging as a powerful initiative to achieve the CSU's goal of providing "Access to Excellence."   Now, the Cal State Online Initiative is a suite of academic technology services and programs that expand the capacity of CSU campuses to deliver fully- and mostly-online degree, credential, and certificate programs for California, the nation, and the world. The goal of the Cal State Online Initiative is to continue increasing the quality, quantity, and affordability of online education offerings to existing and prospective CSU students, resulting in successful graduation and program completion.

Cal State Online Builds CSU's Capacity to Deliver Online Education

Cal State Online services provide prospective students a convenient and intuitive "one-stop-shop" at its website, www.calstateonline.net, offering CSU's extensive online programs, making it easy to discover, decide, and enroll in their CSU online education opportunities. Cal State Online services for CSU campuses include a range of technologies and consulting services that campuses can purchase at a lower cost through systemwide contracts. The Chancellor's Office is also marketing the collective value and opportunities of the CSU's online programs. Before elaborating on the Phase II strategies, a status of CSU's current offerings of online education will be provided.

Cal State Online showcases a world-class inventory of fully online degree programs. Based on a January 2015 assessment, the collective of CSU campuses offered:
- **118 fully online degree programs** with different concentrations (e.g. MBA in finance, human resources, management etc. concentrations)
- Fully online degree programs **graduated 4,320 students** in 2013-2014

According to national reports, about 70 percent of all online students live within a 100 mile radius of campuses offering their degree program. Consequently, hybrid degree programs, those programs where some of the course requirements require a face-to-face component on the campus, are a viable option for many Californians. Based on a January 2015 assessment, the CSU offered:
- **76 hybrid degree programs** with different concentrations
- Hybrid degree programs **graduated 1,045 students** in 2013-2014

Together, the CSU offered **194 fully online and hybrid degree programs** with different concentrations:
- Serving 10,026 in fall 2014 (unduplicated headcount)
- Graduating 5,365 students in 2013-2014
- Delivered by **124 graduate** and **70 undergraduate programs**.

To top off the degree programs, our campuses' Extended Education Divisions offer over 100 fully online certificate programs; frequently designed to serve workforce development needs in the region.

For comparison, UMassOnline was launched in 2001 and is a well-established and successful state university online program initiative. They offer 72 comparable degree programs: 32 bachelor's programs, 38 master's programs, and 2 doctorate programs. Arizona State University Online offers a total of 93 comparable programs: 49 bachelor's programs and 44 master's programs.

Expanding Access to Online Courses

As part of the CSU's strategy to reduce enrollment bottlenecks caused by the Great Recession, the CSU designed and implemented CourseMatch, a cross-campus enrollment program for fully online courses. Each semester/quarter, the CSU offers full-time, qualified students the opportunity to enroll in fully online courses offered by the collective CSU campuses, which have a track record of student success. After the first offering of 34 courses in CourseMatch in fall 2013, offerings have expanded to 77 courses in winter/spring 2015, along with a major effort to automate the application and registration processes. With the online CourseMatch tools, the CSU will now be able to scale access to CourseMatch courses as the demand grows; in fall 2013, about 200 students applied to take CourseMatch courses and that number grew to approximately 300 students in spring 2015. In fall 2015, campuses participating in CourseMatch will hold at least 15 open seats in these courses and the Chancellor's Office will pay campuses for these additional cross-campus enrollments.

CourseMatch has been instrumental in the CSU's response to legislation (AB 386 – Levine) which requires the CSU to provide students a list of all the fully online courses offered by all CSU campuses beginning fall 2015. The goal of the legislation is to provide students access to the available seats in fully online classes that could help them progress toward graduation in a timelier more timely manner. Publishing a list of fully online courses is only one step in providing access and the CSU has taken the additional steps of designing and delivering a scalable strategy to enable the additional enrollment. Through the cooperative efforts of campuses and the Chancellor's Office, full implementation of AB 386 will be ready this fall. Over 3,000 fully online courses are expected to be listed for fall 2015, with an unknown fraction of these courses with available seats.

Cal State Online has developed an additional program to help students graduate in a timely manner: Cal State Online Summer Courses - 2015. Extended Education programs offer a wealth of CSU courses over the summer that cover a wide range of general education and major requirements. In 2014, Cal State Online organized a list of over 700 fully online summer session courses. In 2015, Cal State Online Summer is offering over 900 fully online courses. Approximately 1,400 courses will be offered this summer, but about 500 have already closed to additional student enrollments.

Cal State Online Initiative: Shifts in Strategy

The CSU has broad and deep capacity to deliver high quality online education and is delivering on our promise for "Access to Excellence." The CSU is also building its capacity to expand and strengthen its online education initiatives. Academic Technology Services in the Chancellor's Office is leading the changes from Phase 1 to Phase 2 of the Cal State Online Initiative in collaboration with Extended Education. The changes already underway include:

1. **Campuses choose their Learning Management System.** If campuses choose to use the Phase I platform, they are welcome to do so, under their own campus contract.

2. **Flexibility in course length in self-support programs.** Rather than a fixed eight-week course length, campuses can decide what schedule is most appropriate and effective to achieve their goals and quality standards. State support programs can be part of Cal State Online and the length of courses is determined by Title V and campus policies (semester or quarter schedules).

3. **Flexibility in unit pricing in self-support programs.** Campuses decide on the tuition fees that are most appropriate and competitive to achieve their business and affordability goals.

4. **Flexibility in online delivery formats.** Cal State Online will include fully online and mostly online degree, credential, and certificate programs. Campuses will decide if a limited proportion of the course requirements will include face-to-face activities to achieve the quality standards for their courses. These "mostly online" programs will clearly and completely describe the requirements of the face-to-face activities to prospective students and those enrolling in the mostly online programs will have to confirm their acceptance of these requirements.

5. **Redesign of CalStateOnline.net website**: All fully online and hybrid degree programs offered by all CSU campuses will be presented (vs. 7 programs). The website will enable prospective students to find programs by discipline as well as by campus very easily and direct them to the campuses as quickly and successfully as possible. Cal State Online Summer Courses will also have a designated place on the website. Additionally, customer service information including an 800 number as well as an online request for information will be available on the website for all campuses.

6. **Shared governance and improved communications:** Every campus has a Cal State Online Campus Coordinator and all coordinators meet virtually every month to review and advise on priorities and activities, share exemplary practices, and provide feedback on Cal State Online services. The Chancellor's Office also established the Commission for Online Education, composed of campus presidents, provosts, CIOs, Director of Academic Technology, Statewide Academic Senators, and students, which provides recommendations on policies and strategies related to online education to the Executive Vice Chancellor for Academic Affairs. CSYou intranet websites for the Commission for Online Education and for the Cal State Online Initiative provide significant transparency to all faculty, staff, and administrators about the planning and activities of these groups.

7. **Systemwide contracts and strategies to support quality, lower costs, and increase enrollment**: Academic Technology Services is managing and implementing a number of systemwide contracts that saves the CSU millions of dollars. The contracts support key pillars of Cal State Online.

- Quality programs require support for faculty developing the various skills and knowledge to teach online successfully. The systemwide contract for Quality Matters, a nationally respected non-profit organization provides training for faculty teaching successfully online and has enabled the CSU to save $114,000 in training costs for over 700 CSU faculty over the last 10 months.
- Academic integrity of student performance (i.e. no cheating) in online courses is critical to maintain the quality standards and reputation of our graduates. The CSU currently has a systemwide contract on plagiarism detection that saves $1.6 million of dollars annually. Academic Technology Services has just released a Request for Proposals (RFP) for "academic integrity services" that will include exam proctoring with technology and other technologies to minimize cheating.
- Support services for student success in online courses is also critical and Academic Technology Services is preparing an RFP to establish master enabling agreements with vendors who could provide outreach, coaching, mentoring, and tutoring through technology to retain students in the program and graduate.
- Learning management systems provide a "virtual classroom" for online courses. The CSU's systemwide contract has saved $1.73 million for the 10 campuses using Blackboard's learning management systems and services.
- Technology tools to quickly, reliably, affordably, and effectively create online materials for online courses. These include SoftChalk (25 percent off unit prices) and TechSmith to create online interactive lessons and videos for flipped classrooms. The TechSmith contract is saving campuses $1.9 million over three years. Academic Technology Services just announced the intent to award systemwide contracts for online media platforms that enable campuses to stream video reliably and securely.

8. **Systemwide marketing campaigns for Cal State Online** has been re-visioned. The Chancellor's Office, in collaboration with the campus Cal State Online Coordinators, has focused the Cal State Online marketing messages around the quality and affordability of a CSU degree delivered online. For the first time, a marketing campaign for Cal State Online Summer is being implemented to include radio, digital posters, social media, and blending with campus campaigns. An RFP for a longer-term marketing campaign for Cal State Online will be posted by the start of the 2015-2016 academic year, which will enable marketing campaigns to be a priority in 2015 and 2016.

Conclusion

The Chancellor's Office has successfully redesigned the Cal State Online Initiative to leverage its system size and campus capabilities to deliver a world class inventory of fully- and mostly-online degree, credential, and certificate programs for California, the nation, and the world. The Cal State Online Initiative is positioned to grow its capabilities and expand its reach providing greater access to a quality CSU education for the citizens of California and beyond.

COMMITTEE ON EDUCATIONAL POLICY

Academic Efficiencies and Effectiveness

Presentation By

Ephraim P. Smith
Executive Vice Chancellor
and Chief Academic Officer

Ken O'Donnell
Senior Director
Student Engagement
and Academic Initiatives & Partnerships

Summary

At the March 2015 Board of Trustees meeting, the Committee on Finance heard a report on Administrative Efficiency Initiatives that estimated $50 million in savings from improved business practices: strategic procurement, simplifying and streamlining administrative processes, and organizing services to meet the increasing demands of compliance and campus growth.

This item responds to board members' request for a similar report from Academic Affairs to the Committee on Educational Policy. In this case efficiency, doing more with the same or fewer resources, is measured in terms other than dollars. Gains are expressed in improved opportunity, quality, and success, and savings in reduced time or units to degree, or fewer repeated courses. These efficiencies are measured differently than those of improved business practice, but are no less significant.

Economies of Scale

Academic efficiencies begin with some of the good business practices as described in the March report, including bulk purchasing and shared support for infrastructure. For example, the board has heard reports on the Affordable Learning Solutions Initiative which has been successful driving down the cost of instructional materials like textbooks. More recently, the California State University (CSU) libraries have agreed to adopt a single virtual platform to catalog their separate collections, bringing millions of books, recordings, and periodicals to every student and faculty member in the system.

The Office of the Chancellor further leverages the CSU's size with shared academic services in faculty professional development (the Institute for Teaching and Learning), international

programs, academic technology, student academic support, and community engagement. It also sponsors entire programs at the state level that otherwise would not exist, including CSU Summer Arts, Cal State TEACH, and the pre-doctoral program to recruit minority students into advanced study, positioning them to join and diversify the faculty. Finally, there are the economies of consolidating course offerings, with online delivery and regional consortia to offer programs that are too specialized or expensive for a single campus to mount. Taken together, such economies of scale enhance the student experience and quality of a CSU education, at relatively little additional cost to the state.

Student Success

In the last several years CSU faculty have focused on two curricular modifications that create more efficient pathways to degree. For students who begin as freshmen, a recent collective effort to reduce the overall units to degree has resulted in a record 94 percent of all CSU bachelor of arts and bachelor of science degrees now requiring no more than 120 semester units (or 180 quarter units) of coursework, which is equivalent to the number of units taken in a full-time, four-year degree program.

For students who begin at California Community Colleges, which represent the majority of CSU graduates each year, the new Associate Degrees for Transfer provide similarly clear and efficient pathways to degree, requiring 60 semester units of coursework at the community college and 60 more at the CSU for the 25 most popular majors.

Faculty work to streamline curriculum is complemented by systemwide efforts to reduce time to degree, in the form of new eAdvising tools, technology to clear course bottlenecks, and student learning communities and peer mentoring for personal guidance and direction. One of the most impactful ways the CSU reduces a student's time-to-degree is by improving learning and thus reducing the incidence of dropped, failed, and repeated courses.

Trustee-led innovations to improve freshman readiness also play a critical role. By testing high school juniors and offering Early Start programs the summer before the freshman year of college, the CSU provides all its students the opportunity to earn full college credit from the first term, positioning them from the start to graduate on time. Of these efforts, the Early Assessment Program (EAP) has drawn particular attention, having been adopted by four other states and influencing nationally developed assessments of the Common Core State Standards curriculum.

The board has heard reports from the Division of Academic Affairs and external supporters, such as the Campaign for College Opportunity, which attempt to relate improved completion rates to savings in tuition, increased and earlier earning power, and reduced living expenses. The dollar figures that result can vary widely by the methodology used, and the profile of the students and geographic region studied. However the savings are counted, reducing the time and units to

degree has inarguable non-monetary benefits: students who feel themselves making progress are likelier to graduate. Families and other communities of support who see a clear, focused path to completion understand better what is involved. Additionally, students who graduate sooner have more years ahead of them to return the state's investment, while improving access for the next cohort.

Improved Effectiveness

This item is titled "Academic Efficiencies and Effectiveness" to underscore an important point: reductions in cost are desirable only when the CSU remains educationally effective. Savings that erode quality would not be efficient but merely short-sighted; so from the perspective of educational policy, trustees should understand exactly what the university does with the resources it saves.

As trustees have heard, the Graduation Initiative emphasizes student engagement as a success strategy in the CSU. Improved rates of completion stand to bring California an additional 30,000 graduates over the course of the initiative solely by reducing attrition–that is, through efficiency rather than additional investment. These gains rely in part on broad and deep support for High-Impact Practices like undergraduate research, community engagement, learning communities, and service learning that apply college learning to real-world settings right away, both to deepen what is being learned and to illuminate its relevance and value.

Applicable college learning in the form of research is of particular importance in the STEM disciplines. Immersive laboratory exercises with authentic research provide students with challenging, active learning that engages intellectual curiosity and brings contextual relevance while ensuring educational quality and relevant skills development within the disciplines. While necessary, these types of laboratory exercises are expensive. Moreover, they need to be updated continuously to keep pace with the technological advancements driving the discipline and workforce needs. A recent survey of campuses indicated that the total externally grant-funded research activity acquired for educational support for STEM students alone was over $300 million. These external funds, generated solely through faculty grantsmanship, supplement state revenues to provide state-of the art hands-on, laboratory experiences, as well as providing essential supplies, reagents and consumables, laboratory renovations, general and capital equipment, equipment service contracts and other services.

Any report on academic efficiencies and effectiveness should recognize the early nature of the work. Although faculty have always understood that deep engagement, personal as well as intellectual, drives persistence and completion, tools to quantify that impact are only now emerging. Other kinds of academic efficiency, such as the consolidation of class sections, early delivery of remediation, and eAdvising will be easier to measure, but are too early in their implementation for reliable evaluation. As part of Graduation Initiative 2025, the CSU will

develop better means to precisely measure the impacts of each strategy, whether reported in dollars saved, fewer units or years to degree, or improved educational value.