MASTER PLAN GOALS

In broadest terms, the mission of the California State University is to provide affordable access to high-quality post-secondary education for all eligible Californians. The Information Technology Strategy (ITS) facilitates the use of new technologies in support of this mission. All 11 ITS initiatives adopted in the "first wave" in 1996 were designed to enhance accessibility, improve quality, and contain costs. The initiatives fell into four areas: technology infrastructure, administrative operations, student services, and academic programs.

The *infrastructure* initiatives are the prerequisite for achieving the overall goals of the ITS. They seek to provide each CSU campus a baseline telecommunications capability and personal productivity resources adequate to maintain institutional quality. The *administrative* initiatives contribute to containing costs over the long term by streamlining and integrating major campus support operations and automating labor-intensive processes. Gains in efficiency made possible by the *student services* initiatives lower institutional costs for processing admission applications while making services to students much more convenient. The *academic* initiatives expand student and faculty access to teaching and learning resources through collaborative acquisition, development, and distribution of technology-mediated instructional materials.

In developing the Integrated Technology Strategy, CSU presidents were aware that broadband network connectivity would, in the near-term future, be as common in American households as television or the telephone. Ubiquitous high-speed networks, combined with affordable high-speed computer technologies, would make it possible to provide interactive instruction over the World Wide Web using new multimedia and communications technologies. The intent to use information technology beyond the classroom walls is reflected in the ITS vision statement:

> *"…to provide the best possible environment for the education of CSU students through an integrated electronic environment that enables all CSU students, faculty and staff to communicate with one another and to interact with information resources from anyplace, to anyplace at anytime…"*

The ITS complements policy options that were adopted by the CSU Board of Trustees in May 2003 to achieve enrollment and access goals. One of these policy options addresses academic technology expansion: "The Board further expects campuses to expand the use of academic technology in ways that maintain and improve the high quality of education provided by the CSU in order to free existing physical capacity and to expand access."

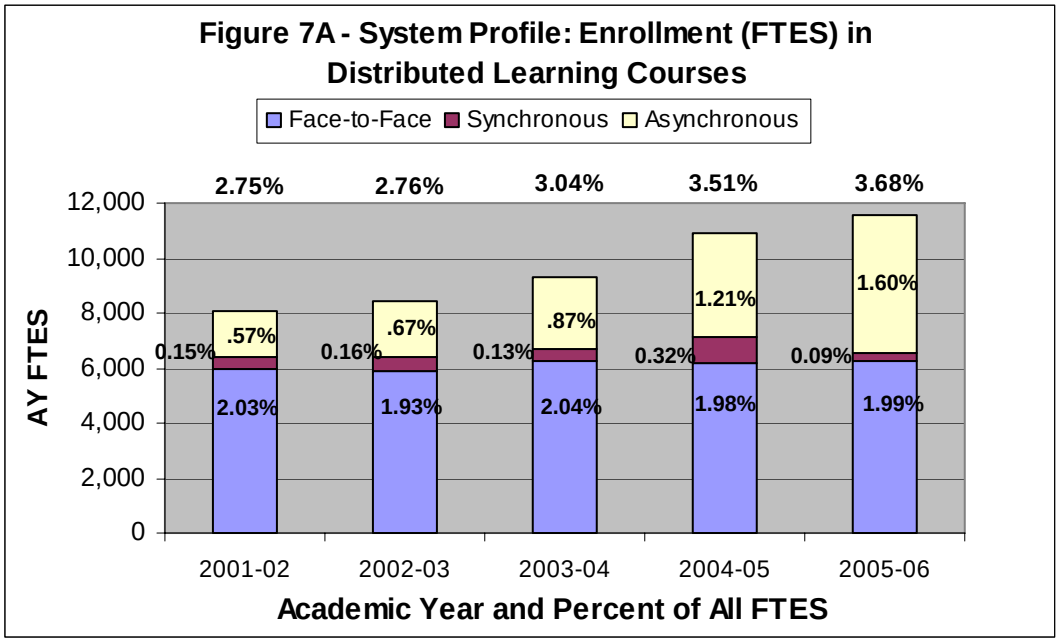
Extending Existing Physical Capacity

The California Master Plan for Higher Education, adopted in 1960, calls for the California State University to provide space for the top one-third of graduating high school seniors and to provide access to undergraduate degree programs for qualified students transferring from community colleges. The commitment of the State and of the CSU to meeting the goals of the Master Plan through 2010-2011 was recently reaffirmed in the Higher Education Compact agreed to by the Governor and the heads of the CSU and the University of California. This agreement projects an annual growth rate of 8,000 students for the CSU over this period, roughly the equivalent of an additional small campus each year. If the projected influx of students is to be accommodated without loss of instructional quality, maximum efficiency must be achieved in the use of existing space and/or additional buildings.

The CSU has taken several steps aimed at accommodating enrollment demand and facilitating graduation, including ways to make more efficient use of lecture and laboratory rooms. Among the options available to campuses to meet this challenge is the expansion of online learning or of other forms of distance or distributed education. Thanks to recent improvements in the information technology infrastructure, CSU campuses are in a position to support substantial and rapid expansion of asynchronous (i.e., Internet or Web-based) instruction at very little additional cost compared with construction of new classrooms.

Growth in the amount of instruction occurring in modes and venues apart from state-supported facilities has been slow but steady. Figure 7A summarizes the volume of enrollment in classes employing three principal modes of distributed learning. These figures include both enrollment from classes taught entirely in a distance-learning mode and enrollment aggregated from classes using a combination of traditional and distance learning approaches. *Face-to-face* instruction—where instructor and students meet together at scheduled times in non-state support sites (e.g., a hospital or a school)—accounts for about half of all full-time equivalent student enrollment (FTES) since tracking of

distributed learning began in academic year 2001-02. The share of enrollment attributable to *asynchronous* (online) instruction has grown from one-fifth in 2001 to almost half (43 percent) in 2005-06. FTES in *synchronous* mode (i.e., traditional televised instruction requiring instructor and students to meet at fixed times and sometimes at fixed locations) continues to hover around two percent.



Aggregate enrollment in distributed learning modes in AY 2005-2006 totaled 11,361 FTES, an amount equivalent to 3.6 percent of total main-campus FTES for the system. That represents a student enrollment greater than ten CSU campuses. (The median percent for all 23 campuses is 4.5 percent of all main-campus FTES) For AY 2005-2006, enrollment in asynchronous instruction alone (4,834 FTES) exceeded that of the three smallest campuses. Because this enrollment is dispersed across all of the campuses, it does not, at the current level, directly offset the need for new construction. By enabling students to engage in instructional activities from their homes or other off-campus locations distributed learning can, however, extend the capacity of existing facilities to handle additional students. Significant expansion of online learning in particular has the potential to reduce the need to build additional classroom buildings.

CSU faculty have assigned a very low priority to online instruction since the technology survey was instituted in 2000. In each of the four surveys faculty were asked "how important they believe it is to provide students with access to electronic on-line course instruction at anytime, in any place." The mean scores for responses to this question have consistently ranked below 6.00 on the zero-to-ten scale where zero equates to "not at all important" and 10 means "extremely important". This question has, in fact, received the lowest mean score rating of any item in all four survey administrations. By contrast, students have consistently rated this item among the highest in importance in the student surveys. In part, the issue comes down to the perceived motivations or incentives to use online instruction versus the barriers for doing so. Some new items from the 2006 faculty survey shed some light on these questions:

- Half of the faculty said that the impact on the quality of teaching and learning would make it "more likely" or "much more likely" that they would teach courses online. One out of three faculty said that this impact would have "no effect" on their decision to teach online.
- Half of the faculty said that the requirement to acquire new pedagogical knowledge necessary to teach effectively online would make the choice of doing so "more" or "much more likely". A third said the technology learning curve would have "no effect" on their interest in online teaching. For only 13 percent did these demands make it "less likely" or "much less likely" that they would teach online.
- Faculty views are evenly split on the importance of special funding to adapt regular courses to an online environment. For one in five respondents, absence of such funding makes it "less likely" or "much less likely" that they will teach online. One in four said funding availability is not a barrier. For most (55 percent), funding appears to play no role.

- The increased workload associated with teaching online is clearly perceived to be an obstacle to faculty engagement in online teaching. A third of the survey respondents said that workload demands make it “less likely” they would teach online; for fifteen percent, workload demands made it “much less likely”. Thirty-seven percent said workload issues had “no effect” on their willingness to provide such instruction. Only one out of ten perceives workload to be a positive factor.

Campuses differ greatly in the amount and kind of distance and distributed learning opportunities they provide. Figure 7B shows the amount of distance learning FTES earned in 2005-06 by learning mode. For purposes of reporting a fuller picture of instructional activity by learning mode, FTES from off-campus centers has been aggregated and is reported in the chart below as an additional campus. The total number of campuses thus is 24.

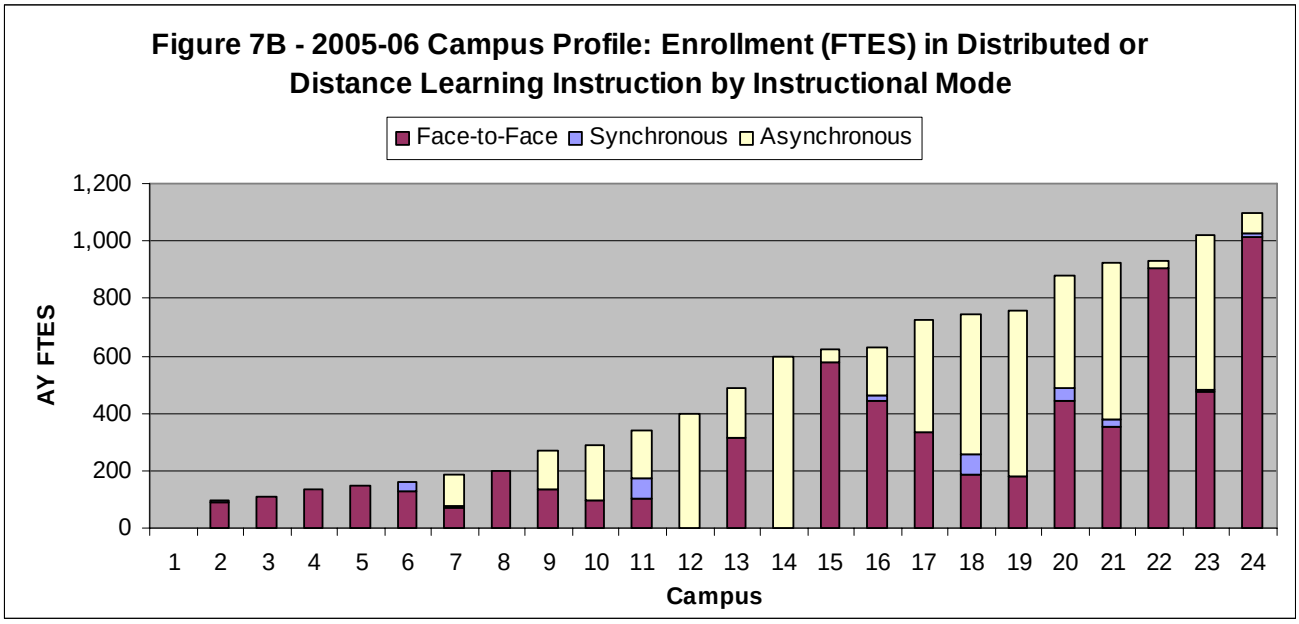
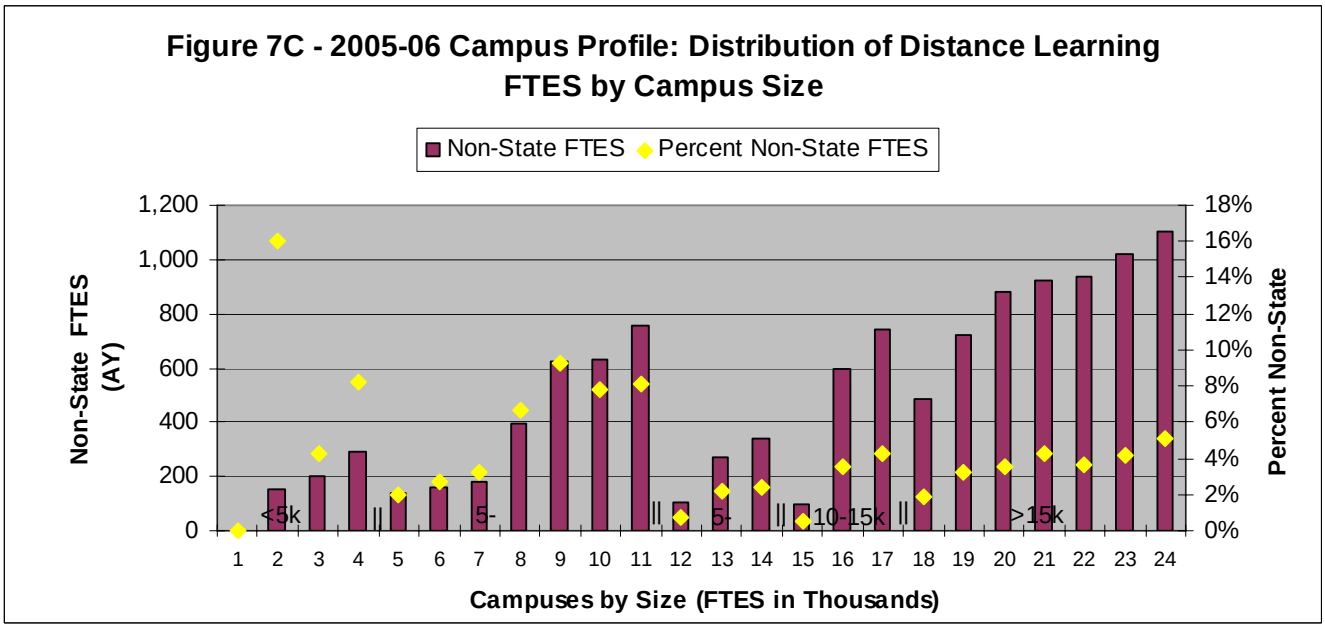


Figure 7C shows the amount of distance learning FTES earned on each campus, and on all off-campus centers as a group, and the percentage of total academic year FTES it represents for each campus. Campuses are grouped by relative size, as indicated by the enrollment ranges in increments of 5,000. The percentage of FTES earned in a distance or distributed learning mode ranges from near zero to just under ten percent of total campus FTES.



Applications of Online Learning

Following are two examples of ways in which CSU campuses make use of the technology infrastructure to achieve strategic goals of the Master Plan. Offering online degree programs demonstrates the capability to both serve the needs of Californians who find it difficult or impossible to attend traditional on-campus programs and mitigate the need for new physical space. Innovative use of technology tools is providing a convenient and effective method to ensure that incoming students have the basic academic skills necessary to undertake college-level work thus reducing demands for remedial instruction in Math and English.

Online Degree Programs

According to a survey completed in June 2006, 15 CSU campuses offer 44 online degree programs, two-thirds of which are self-support. While the majority of programs are at the Masters level in professional and technical fields, baccalaureate and credential programs attract more students. CSU executive management is exploring ways to expand and improve delivery of online degree and credential programs.

Foundational Skills Initiative Using Online Learning

Ensuring that students enter the university adequately prepared for college level work is one of the top priorities of the CSU. The Early Assessment Program (EAP) has been established to provide high school juniors with a snapshot of their readiness in reading writing and mathematics. To support advance preparation for college in these areas a variety of online learning tools have been developed. These tools help high school students, their parents, school counselors and teachers plan and prepare for admission to the CSU.

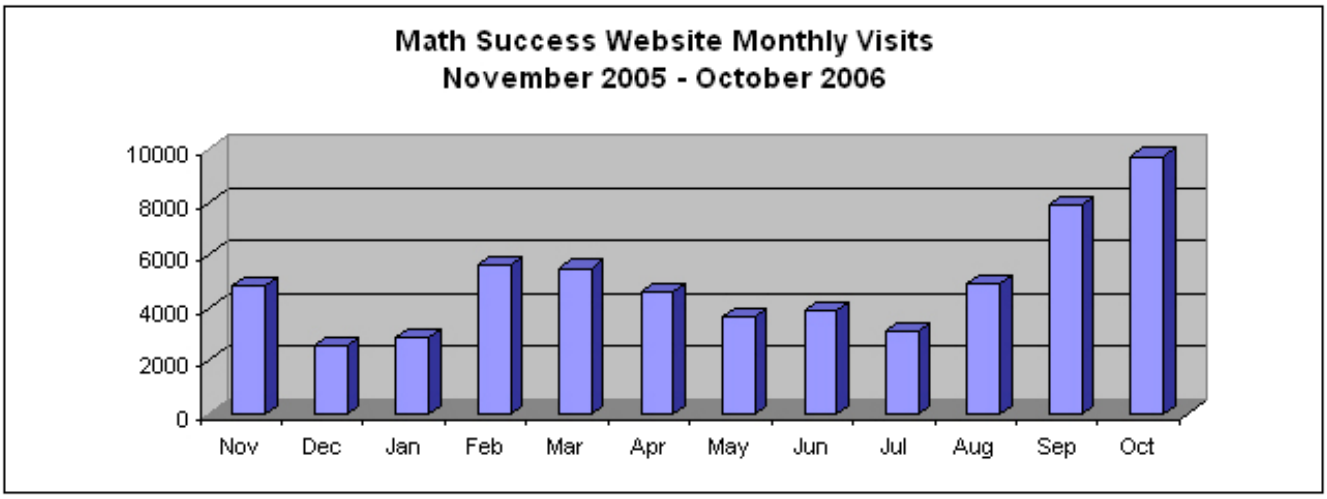
There are four online learning tools that are being used to help improve students' preparation for college in mathematics, reading and writing. These four tools are the Math and English Success websites, Aleks Intelligent Online Tutorials and the Expository Reading and Writing Online Community.

CSU Math Success and English Success Websites

The CSU Math Success and English Success websites help incoming students prepare for college level work in these and other related disciplines. The websites provide high school students, parents, teachers and counselors with the following services.

- Personalized authoritative advice about the CSU English and math placement requirements and how to meet them.
- Testimonial videos motivating students to take proactive steps to satisfy the CSU placement requirements in the most efficient and expeditious manner.
- Educational tools and planning resources that students can use to map their progress toward meeting CSU placement requirements while they are still in high school.

Usage of both the Math and English Success websites has grown steadily over time. The graphs below show the usage over the past year for both Math and English Success.



Aleks Intelligent Online Tutorials

Aleks (Assessment and Learning in Knowledge Spaces) is a web based assessment and tutoring system driven by artificial intelligence. The Aleks tool provides students with assessments about their level of knowledge in specific areas in mathematics, thus allowing for customized instruction in those topics requiring remediation.

Expository Reading and Writing Online Community

The CSU Expository Reading and Writing Task Force has developed a curriculum and teacher training materials for an expository reading and writing course for high school students. The course is designed to prepare students for college level English and it is aligned with the California English-Language Arts Content Standards.

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