

## EXECUTIVE SUMMARY

*Measures of Success* (MOS) is the vehicle through which California State University informs the legislature about the progress and benefits of the Integrated Technology Strategy (ITS). This is the sixth report in the series and the fourth year describing changes from the baseline data (1999-2000). MOS reports measure progress in achieving the benefits associated with specific ITS initiatives in the following outcome categories:

- ◆ Excellence in Learning and Teaching
- ◆ Quality of the Student Experience
- ◆ Administrative Productivity and Quality
- ◆ Personal Productivity

The four outcomes of the Integrated Technology Strategy result from the strategic application of information technologies in support of the core programs and operations of the university. These four outcome areas correspond to four sets of ITS initiatives: academic, student services, administrative systems, and technology infrastructure. As of 2004, the initiatives under the goal area, Quality of the Student Experience, have been institutionalized and are no longer part of the MOS report. The MOS also discusses how technology can be used to leverage *existing* physical capacity to help meet CSU enrollment goals.

Institutional and individual user data are collected to inform the MOS process. Institutional data are drawn from systemwide databases and annual campus surveys. Individual data are collected through biennial telephone surveys of representative samples of CSU students, faculty, and staff. Major findings are reported below. In some instances survey mean score ratings are cited based on an 11-point scale of 0 to 10, where 10 indicates maximum importance or satisfaction.

The MOS provides an overview of institutional progress in the ITS and an understanding of individual user needs and attitudes concerning information technology. The report documents the growing investment in information technology as a strategic resource of the CSU. The data show that in almost all of the reporting categories technology has had a generally positive influence on institutional performance and user access and satisfaction, sometimes dramatically so.

## MAJOR FINDINGS

### Excellence in Learning and Teaching

The ITS academic initiatives seek to improve academic quality, increase student access, and contain costs.

#### Importance of Information Technology

- Faculty assigned an average importance rating of 9.20 to information technology resources, the highest score given to any item in the 2004 user survey. On balance, faculty assign very high importance ratings to almost all forms of student use of computing and network resources and, in some cases, high percentages of faculty require their use by students in their classes.
- Students rated the importance of computer literacy for their future employment the highest of any item in system surveys conducted in 2001 (mean score of 9.12) and 2003 (mean score of 9.08). However, when asked how well they thought their institutions were preparing them for the technology skills they will need on graduation, students responded with a mean rating of only 6.60 in 2003. When asked how well their department prepares students to use technology skills in their careers, faculty responded with a relatively low rating of 6.86.
- Student and faculty views are strongly at variance regarding the importance of “anytime, anyplace” access to instruction. In both 2001 and 2003, students agreed strongly that access to online instruction was very important (mean scores over 8.00). Three faculty surveys since 2000 produced importance ratings of only 5.80, 5.07, and 5.67, the lowest average ratings of any item in the surveys.

### **Technology in the Curriculum**

- Two-thirds of faculty required students to use the campus computer network and roughly three-fourths required use of the Internet in their classes. Moreover, faculty satisfaction ratings of the pedagogical effectiveness of learning materials on the Web, e-mail, and the Internet generally all show significant increases in the past four years. For example, mean satisfaction ratings for use of the Web increased from 6.89 in 2000 to 7.99 in 2004.
- Over the last five years, the number of classes (course sections) supported by Web-based course management systems grew from 2.8 percent of all course sections offered to 18.2 percent, an increase of over 500 percent.

### **Instructional Resource Sharing**

- Individual use of information resources available through the CSU Electronic Core Collection has increased from roughly 2 million in 1999-2000 to 10 million in 2003-04, while the average cost per use declined from \$0.35 to \$0.11 during the same period. The cost avoidance achieved through collaborative purchasing amounted to almost one-half million dollars in 2003-04.

### **Instructional Resource Development**

- In 2003-04, 21 CSU campuses reported that they had central instructional technology development centers to assist faculty in creating and using technology-mediated teaching and learning resources. In 1999-2000, only five campuses had such centers.
- Faculty participation in instructional technology development activities increased from about 4,000 in 1999-2000 to almost 10,000 in 2003-04. Since the baseline year 1999-2000, both personnel positions and direct fiscal support for instructional technology development have declined modestly.

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## **Quality of the Student Experience**

This edition of the MOS omits the Student Friendly Services Initiative because, as reported in November 2003, the number of electronic applications had far exceeded the 2008 goal, rendering further tracking unnecessary.

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## **Administrative Productivity and Quality**

The purpose of the administrative initiatives is to increase the accessibility and utility of major administrative information systems to students, faculty, and staff, while improving the efficiency and the quality of administrative services. To achieve this, the goal of the Common Management Systems (CMS) is to have all campuses and the Chancellor's Office use common PeopleSoft applications in full production mode, supported by a consolidated data center, by 2007.

### **Common Management Systems Implementation**

- As of the end of 2003-04, 17 campuses had implemented the CMS Finance information system; 21, the Human Resources system; and eight, the Student Administration system.
- In 2003-04, more than eight out of 10 staff working with human resources data used applications of the Common Management System/PeopleSoft information systems. For financial information, the percent of staff using CMS/PeopleSoft applications was two-thirds, and for student records, the CMS/PeopleSoft share was almost one-half (44 percent).

### **Administrative System Data Center Consolidation**

- In 2003-04, an estimated cost avoidance of \$3.38 million was realized for the year; the total was \$0.46 last year. This was primarily due to planned lower costs for the Unisys data center and an increase in the number of campuses using the center.

## Personal Productivity

The information technology infrastructure initiatives seek to provide to each campus a baseline quantity and quality of computing and network resources to enhance the personal productivity of individual students, faculty, and staff.

### Network Connectivity

- Increases in campus backbone network capacity and reliability associated with TII improvements had the positive effect of lowering both peak and average utilization for all CSU campuses despite increases in network traffic.
- In 2001-02, only five campuses were able to provide high-speed network connectivity to individual workstations. As of the end of 2003-04, 15 campuses were doing so.

### Workstation Environment

- In 2003-04, 75 percent or more of the workstations on 11 campuses met the baseline expectations. The number of campuses on which less than one-half of the workstations met baseline expectations fell from five in 2001-02 to two.
- Classrooms equipped to support multimedia presentations and uses of Internet resources comprise almost two-thirds of instructional spaces.

### Training and Support

- There has been a steady increase since the baseline year 1999-2000 in the average hours per week that call-center help is available to faculty, staff/administrators, and students.
- Almost all faculty and staff report having access to technical support for resolving problems with university-provided computers or software, and roughly nine out of 10 in both groups say that the problems were resolved either all or most of the time.
- Progress toward meeting baseline-training standards has been uneven due in part to changing budgetary conditions and campus priorities. When participation rates and resource allocations are considered, disparities among campuses for all three user groups are greater in the area of training than in any other component of the technology infrastructure.

### Fiscal Support for IT Infrastructure

- The 2004 Annual Campus Computing Survey documents a decline in academic computing budgets for the CSU compared to the survey sample of 83 Carnegie Masters I institutions. For example, when asked how this year's total academic computing budget compared to that of last year, 61 percent of CSU campuses reported that it had been reduced by more than 5 percent compared to only 29 percent of comparison institutions.
- Fully 63 of the 83 comparison institutions (67.5 percent) charged a computer or IT fee for all students in 2004 while only two CSU campuses had such a requirement.

### Baseline IT Infrastructure Capability

- Continued progress toward baseline capability was achieved in four of the five information technology infrastructure components in 2003-04:
  - Four campuses met baseline standards for the physical telecommunications plant (down from the previous year due to approval of new construction); the number of campuses below 50 percent declined from 18 in 2001-02 to 11 in 2003-04.
  - The number of campuses achieving baseline standards for the workstation environment decreased from eight to seven owing to budgetary constraints on equipment replacement; the number of campuses below 50 percent fell from five to two.

## MOS VI: Executive Summary

- Improvement was most evident in the area of high-speed network connectivity where 15 campuses were at baseline.
- Six campuses met baseline targets for technical support services.
- None of the campuses met baseline standards for user training.

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### Master Plan

One goal of ITS investment in distance and distributed (online) learning technologies is to accommodate additional enrollment without corresponding increases in building construction.

- The California Department of Finance projects that CSU enrollments will increase 27 percent, from 408,000 in fall 2003 to 518,000 in 2012, a total of 110,000 students (over 82,000 FTES). If traditional face-to-face learning methodologies are employed, this increase in enrollment suggests the need for roughly six medium-sized campuses with physical plants worth about one-half billion dollars each in initial construction costs.
- Credit earned in non-state support sites in 2003-04 totaled 9,321 FTES or 3.04 percent of the total 306,444 FTES, up from 2.76 percent of the total FTES reported for the previous academic year.
- Credit earned in online learning has increased only slightly since tracking by learning mode began in 2001-02, from 0.57 percent to 0.87 percent of all enrollment (1,666 to 2,660 FTES).
- The paucity of online and distance learning activity in the CSU has produced little movement toward leveraging existing physical space to accommodate new enrollments.