

JUST THE FACTS

Some MOS metrics have remained consistent over the period while others have been introduced as new policies and new technologies emerged. Tables 2 and 3 in Appendix A offer a high-level summary (from the 2000 baseline year to 2007) of the major trends in academic and administrative technology and in networking at the institutional level, and of changes in user behavior and attitudes.

Positive Findings: The indices shown in those tables were selected from the full range of available data based on their significance for ITS success. Of 45 selected institutional metrics in the MOS report, fully 89 percent showed positive longitudinal gains. Of the 61 user metrics for students, faculty and staff, 80 percent showed positive longitudinal change.

Some of the most significant institutional achievements were in: library resource sharing; multimedia repositories for online instructional resources; Internet use; course management systems that improve student learning and faculty administration; electronic student services; common management systems for campus financial, human resource, and student administration functions; workstation access and quality; networking and wireless technologies; and campus telecommunications infrastructure buildout.

User surveys show that student computer access and home-based broadband access are virtually ubiquitous by 2007. The greatest increases in the use of technologies over the period occurred in administrative systems for registration, grades, financial aid, and degree progress; instructional technologies, and campus-based wireless networking. Students gave extremely high importance ratings to IT literacy for future employment, and were generally satisfied with campus technology resources, services, and skill preparation.

Increasingly, faculty employ a wide range of online technologies in instruction such as multimedia and electronic databases, presentation graphics, specialized software applications, websites, and team-based activities. They reported greater use of campus administrative systems and campus wireless networks, and consistently gave positive evaluations to technology support services. Staff too gave very high importance and satisfaction ratings to campus technology resources and services, and their use of the new PeopleSoft common administrative systems increased dramatically during its implementation across the system.

Campus Baseline Capability: Quantity and quality standards in five categories define a minimum level of technology infrastructure for each campus: the telecommunications infrastructure (backbone network and electronics that provide broadband connectivity); workstation standards (hardware and software currency); high speed network access (from individual workstations); technical support services; and user training. The state bond investment of \$250 million was used to support the technology infrastructure buildout to a minimum baseline capability on CSU campuses. By 2008, fully 22 of the 23 campuses had met the standards for the telecommunications infrastructure and workstation network access. Campuses have also made significant progress toward meeting baseline standards for workstation quantity and quality. Achievement of baseline capability in the areas of support and training has been uneven. All five categories, however, remain prerequisites for achieving progress in the academic, administrative, and networking goals of the ITS as measured in the MOS.

The telecommunications infrastructure buildout had two major components: network electronics (switches and routers) and cable plant construction (remodeling, trenching, cabling, and wiring). Funding, purchasing, and control of the former (approximately \$80 million) were highly centralized. With the exception of overall standards, operational management of the latter was decentralized to the campuses in order to accommodate their individual needs. Technical and legal issues sometimes slowed progress, but in the end, many campuses added their own funds and resources to complete the work, again with oversight by the central office on standards.

Stability: The dominant pattern at both the institutional and individual levels has been one of relative stability; change occurred slowly and in predictable directions. In some areas, there was very little change over the period on matters that historically had few resources devoted to them (e.g., user training and support services). In others, technology soon attained the status of a commodity, a daily appliance that almost everyone had and used (e.g., personal computers, high speed network access). In still other areas, technology use and satisfaction were relatively high to begin with and remained so.

Technology Changes: Information technology is one of the most volatile of an institution's assets. Learning management systems, wireless networks, smart classrooms, and a host of other issues assumed prominence quickly after they appeared. MOS data collection procedures moved stable items out of the process as it added new ones. As a result, it was not feasible to conduct longitudinal tracking of all data points for the entire period.

Policy Changes: In addition to new technologies, the MOS served as a barometer of evolving policy priorities over the past decade. Chief among these were security and identity management, online instruction, adaptive technologies, and cost recovery and avoidance. In general, changes in CSU policy concerns matched those expressed by institutions nationally.

Campus Variations: CSU campuses are characterized by enormous diversity in size, programs, history, culture, organization, leadership, and resources. Only system findings were reported in the MOS so most of the campus variations in the data were not discussed. However, even a cursory glance at the detailed data tables reveals a great deal of campus variation around mean scores and system norms. Yet the ITS goal of achieving a baseline capability for all campuses on most IT resources did produce a steady if not dramatic closing of the gap and movement toward greater uniformity (especially in the areas of telecommunications infrastructure and administrative information systems).

User Variations: Each of the three user groups (students, faculty, and staff) occasionally showed statistically significant sub-group differences that paralleled sample stratification (e.g., discipline and rank for faculty, and class level and ethnicity for students). One area that differentiated staff was satisfaction toward the common management system implementation; more experienced users became more satisfied over time. However, differences among groups of students, faculty, and staff were usually greater than those within them on the three dimensions surveyed—i.e., technology access, use, and satisfaction.

National Comparisons: On the vast majority of IT issues, CSU campuses are more like comparison institutions nationally than different from them. This was especially true in fiscal expenditures, policy priorities, new technologies, and academic technology. Given its emphasis in recent years on administrative systems and networking, the CSU was usually ahead of national norms in these areas.