

DATA SOURCES AND METHODOLOGY

The CSU has conducted a wide range of data collection efforts to support the *Measures of Success* (MOS) process. Both institutional surveys and individual surveys of students, faculty, and staff have been administered from the baseline year of 2000 through 2007. Following is a discussion of the nature, intent, and use of each of these surveys. It includes a list of the major topics that were covered; a brief mention of the questionnaire design process and pilot testing (if applicable); a review of the sample size, characteristics, and selection methodology; administration logistics; and explanation of the survey's confidence levels and sampling error margins (where applicable). The intent here is to provide both a technical and a practical overview of how the various surveys are conducted and what they contribute to the MOS.

Annual Systemwide Technology Survey

Certain types of campus data often are mandated by law and are collected, synthesized, and published by systemwide offices. In those instances, it makes little sense to collect the data a second time from the campuses. These data include official demographic and quantitative records on students, faculty, staff, space and facilities, course enrollments, administrative budgets, and so forth. Where appropriate, these official databases and reporting sources were used in preparation of this report.

Other aggregate statistics are collected at the program or department level to monitor and evaluate major systemwide initiatives such as the Technology Infrastructure Initiative (TII), Common Management Systems (CMS), the Center for Distributed Learning (CDL), Multimedia Educational Resource for Learning and Online Teaching (MERLOT), libraries, and so forth. These, too, require only a relatively modest, informal series of requests to make them available for reports of this nature.

Annual Campus Technology Survey

This institutional survey was initiated for the purpose of collecting information identified in the *Measures of Success* report and to provide technology-related data for internal CSU uses. The survey, coordinated by campus chief technology officers, addresses every important facet of the Integrated Technology Strategy—academic, administrative, and infrastructure-related. For the most part, the items in the survey call for quantitative data on the amount and use of technology resources. Other items ask campus Chief Information Officers (CIO) for informed judgments about the state of technology or the roles of user groups. Campuses were also asked questions concerning institutional policies and practices pertaining to end-user technical support and training. The increasingly distributed nature of technology resources and services on most campuses makes each of these tasks more difficult. Campus and Chancellor's Office staff engage in an extensive, iterative process for correcting past and present data errors.

Biennial Student, Faculty, and Staff Technology Surveys

In addition to institutional data and broad aggregate indicators, it was necessary to gather individual information about staff, faculty, and student experiences with technology. Following are descriptions of those surveys and of the methodology underlying their administration. Some of the questions in the surveys for all three groups were modified or deleted over time due to evolving technologies and absence of significant change in the findings from previous surveys. The surveys also sought to address emerging policy concerns of the campuses and system office.

Faculty Survey

The Social and Behavioral Research Institute (SBRI) at CSU San Marcos conducted the first faculty survey in the MOS series in fall 2000. In spring 2002, 2004, and 2006 additional faculty surveys were conducted. Only full-time faculty were surveyed. Part-time faculty have only marginal access to campus space and technology resources, and it was determined that the costs of attempting to reach them by phone would be prohibitive. The stratified random sample included approximately 3,200 faculty selected according to discipline and rank.

In these surveys faculty were asked about their: 1) views on the importance of information technology; 2) perceptions of the availability to them of computing and network technologies and services; 3) use of these resources; and 4)

MOS IX: Data Sources and Methodology

satisfaction with the quantity and quality of the technology and support available to them. The results of the 2000 survey provided baseline information. Comparisons of the results of the 2002, 2004 and the 2006 surveys with the baseline data permit identification of trends that may have occurred over these seven years of ITS implementation.

Selected data from the faculty surveys are contained in the body of this and previous MOS reports. A more detailed examination of the faculty data can be found in the appendices of previous reports.

Staff Surveys

Telephone staff surveys were conducted in spring/summer 2000, 2002, 2004, and 2006. They were based on a sample of over 2,000 staff and administrators randomly selected by job classification according to their proportions in the campus community. The four stratification classes used for drawing the sample were managerial, professional, clerical/secretarial, and technical. Staff in service, craft, and maintenance occupations were excluded from the sampling design because most either had little exposure to information technology or could not be readily contacted by phone. The SBRI staff survey provides data for making comparisons among staff, students, and faculty, and among sub-groups of these populations over time. The staff surveys examined technology access, use, and satisfaction, as well as training and support services.

The seven-year period covered by the staff surveys was one of expanding migration from centrally managed, locally networked (so called "client-server") information systems to Web-based applications that facilitate access to information across a wide variety of information sources. Just as library holdings and university class schedules are now searched solely or primarily via Web browsers, so too have browsers become the most common user interface for entering and retrieving information from locally designed and managed networks to massive administrative information systems. All of the CMS Oracle/PeopleSoft systems, for example, are now Web-based or soon will be when system upgrades are completed.

Selected data from the staff surveys are contained in the body of this and previous MOS reports. A more detailed examination of the faculty data can be found in the appendices of previous reports.

Student Surveys

The four student surveys in this series (administered in the spring of 2001, 2003, 2005, and 2007) closely mirrored the faculty surveys for the purpose of drawing comparisons between student and faculty perceptions and behavior. However, the surveys also drew items from previous CSU system student surveys in fall 1998 and fall 1999 in order to track longitudinal change. The sampling methodology followed that of a systemwide fall 1998 student survey—a stratified (by class level and student ethnicity) random sample of approximately 3,200 students drawn from the entire CSU student population and conducted via telephone interviews by SBRI. The spring 2007 student survey reflected some of the changes made to the 2006 faculty survey.

Summaries of the 2007 student survey are contained in Appendix C. Highlights of this summary are cited in the text of this report and in the Executive Summary. Reports of user surveys from SBRI are posted to the MOS Web site at: http://its.calstate.edu/documents/Data_Collection/III_Biennial_Surveys/III_Biennial_Surveys.shtml.

Rating Scale

In all three user surveys, an 11-point rating scale was employed to measure opinion. This scale was used on survey questions asking about the importance of technology and satisfaction with it. Respondents were asked to express their opinion using numbers from zero to 10, where zero equates to not at all important or satisfied, and 10 equates to extremely important or satisfied. Selected mean scores are referenced in the body of the report, and all mean scores together with standard deviations (indicating the degree of consensus around the mean) are reported in the executive summaries to this year's student survey.

Annual National Campus Computer Survey

Since 1990, the annual Campus Computing Project has been the largest continuing study of the role of computers and information technology in American higher education. This national study was conducted by mail each summer and fall through surveys sent to (in most cases) the chief information officers on U.S. campuses; in 2005, the survey

MOS IX: Data Sources and Methodology

migrated to Web-based administration. All 23 campuses of the CSU participated in the 2007 study. Information about this project is available at: <http://www.campuscomputing.net>.

The survey focuses primarily on academic computing resources and services to support instruction and scholarship. However, it also touches on institutional policies concerning information technology such as student technology fees, acceptable use policies for networks, intellectual property, and strategic planning.

Each year, the CSU contracts with the survey provider for customized data comparing the CSU findings to Carnegie Masters I institutions nationally; a total of 93 such institutions participated in this year's survey. Many of the questions from this survey provide the CSU with a policy and budgetary context within which the MOS metrics can be considered.

EDUCAUSE Center for Applied Research (ECAR)

The Educause Center for Applied Research (ECAR) is the leading research organization on information technology in higher education in the nation. In 2004, 2005, and 2006, ECAR sponsored surveys on undergraduate students across the country. In the 2006 study, 96 institutions were represented in the sample and more than 28,000 students participated. The 2007 CSU student survey, the fourth and last in the series since 2001, was substantially revised to reflect changing technologies and as a means for drawing national comparisons to the ECAR survey. Several of the questions in the latest CSU questionnaire were borrowed from the ECAR survey for that purpose.

A Methodological Note

The standards governing design and administration of the faculty, staff, and student surveys, and of the methods for analyzing the data, are those commonly used by professional social scientists. The sampling margin of error for the systemwide surveys of CSU faculty, staff, and students is +/- 1.75 percentage points. That is to say, given the sample size between 2,000 and 3,000 respondents, one can be 95 percent confident that the mean score for the survey sample would vary by fewer than 1.75 percentage points from the mean score of the total population if repeated surveys of this nature were conducted. In 5 percent of the cases, the margin of error would exceed 1.75 percentage points.

Because of the smaller number of cases collected at each campus, single-campus estimates are less stable. The margin of error for the individual campus samples is +/- 8 percentage points. Only system data are provided in this report. Faculty data are weighted for campus size; equal numbers of staff and students were interviewed from each campus. On balance, the samples of students, faculty and staff closely approximated their demographic distributions in the system.

The MOS reports findings in simple, non-technical formats, and mentions only those changes over time or differences between user groups that appear to be of statistical significance or substantive importance. All user survey data are supported by detailed statistical analysis and published in studies prepared by the Social and Behavioral Research Institute (SBRI).

Social and Behavioral Research Institute (SBRI)

All of the surveys of individual students, faculty, and staff noted above were conducted through computer-assisted telephone interviews by staff of the SBRI. In each instance, professional SBRI staff drew the samples in conjunction with campus representatives, oversaw the survey administration, processed the data, and submitted reports to the Information Technology Services division at the system level. The SBRI operations were closed June 30, 2007 following completion of the final student survey for the CSU.

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