

CONCLUSION

The Measures of Success report series began in 1999 with the development of metrics for initiatives within the Integrated Technology Strategy. Most baseline data were collected in 2000; other measures were defined later. Because survey questions sometimes change or are discontinued over time, the beginning and end dates for some items may be different. The databases included annual campus surveys on institutional metrics and biennial student, faculty, and staff surveys on attitudes and behavior concerning technology. The 2007 report is the last in the series that tracks progress against the baseline. Next year's MOS report will be the last in the series and will offer a broad overview of lessons learned together with future plans for the ITS.

The eight-year reporting history of the MOS documents the success of the ITS. Major factors contributing to that success include:

Executive Leadership: One of the most impressive features of the ITS has been the involvement of CSU campus presidents in its planning and execution. A Technology Steering Committee (TSC), comprised of seven presidents and two system executive vice chancellors, has met every month since its inception in 1993 to plan and develop the ITS process. This degree of collaborative presidential leadership in IT is a rare occurrence in higher education, and has placed technology near the center of the policy agenda in the CSU system. More recently, an IT steering committee of campus provosts was formed to complement the TSC.

Baseline Infrastructure: Information technology permeates every important facet of the modern university, academic or administrative. A robust technology infrastructure is a prerequisite for both quality and productivity in the digital age. Information technology is the crucial infrastructure of the 21st century, similar to the role that a physical infrastructure played in previous eras.

Campus cooperation has revolved around the concept of baseline, or the goal of ensuring for each campus at least a minimum level of IT resources and capabilities. By reducing inequalities among campuses in the system, both institutional and personal productivity and efficiency are enhanced. The CSU has leveraged the size and resources of the 23 campuses in the system, and thereby narrowed the technological gaps among them.

Culture of Evidence: Through investments in campus, student, faculty, and staff surveys, the CSU has become one of the most data-rich systems of higher education in the nation in the area of IT. The MOS has contributed to data-driven decision making among policy planners in the CSU. It has also served as a sort of "report card" for meeting the accountability challenge required by the state's support of information technology. The CSU has annually tracked and reported on its "metrics for success."

The tables below offer a high-level summary of the major findings from baseline through 2007. The indices shown were selected from the full range of available data based on their significance for ITS success. It is noteworthy that of the 45 longitudinal metrics in the institutional table, 40 or 89 percent show positive outcomes over the period; of the 61 longitudinal metrics in the user table for students, faculty and staff, 49 or 80 percent show positive change. In some instances, the gains are dramatic; in others, they are more modest but nonetheless positive. In still other cases usage rates or satisfaction ratings were high to begin with so there was little room for improvement.

The tables illustrate the progress toward baseline and beyond. The metrics show individual access to, use of and satisfaction with various aspects of IT as well as institutional technology capabilities. Some of the most significant institutional achievements are in: library resource sharing; multimedia repositories for online instructional resources; Internet use; learning management systems; electronic student services; common management systems; workstation access and quality; networking and wireless technologies; and campus telecommunications infrastructure buildout. User surveys show that the greatest gains occurred in the areas of: student use of administrative systems, instructional technologies, and networking; faculty use of online teaching technologies; and staff use of administrative systems and remote access to campus networks.

**Table 7A - Progress of ITS Initiatives:
Institutional Indicators 2000-2007**

ACADEMIC INITIATIVES		
Survey Item	2000/01	2006/07
Library Resource Sharing		
# of Electronic Core Collection (ECC) resource providers	5	27
# of times ECC resources were accessed	2.5M	21.3M
Cost per use of ECC resources	\$.33	\$.16
Estimated cost avoidance through collaborative purchase of ECC	\$374K	\$1.2M
# campuses with automated borrowing systems	10	18
Average cost per remote borrowing transactions	\$21	\$23
Multimedia Repository		
# CSU MERLOT members	149	1,473
Total # MERLOT members	3,922	47,541
# MERLOT peer reviews	35	2,281
# MERLOT website visits	188K	4.8M
# MERLOT learning objects	3,033	17,133
# MERLOT learning objects with model assignments	86	889
Distributed Learning and Teaching		
Course sections supported by learning management systems	3%	34%
Total FTES enrollments in non-state venues	8,070	13,772
FTES enrollments in non-state venues as percent of total FTES	2.8%	4.1%
Centers for Instructional Technology Development		
# campuses with central instructional technology centers	5	20
# campuses with non-central instructional technology centers	2	12
# faculty participations in campus instructional technology centers	4,205	9,945
Faculty FTES devoted to instructional technology materials	110	64
Staff FTES devoted to instructional technology materials	126	151
Total campus expenditures for instructional technology centers	\$7.4M	\$14M
STUDENT FRIENDLY SERVICES		
Survey Item	2000/01	2002/03
# using student planner	259K	382K
Electronic applications as percent of total	41	69
ADMINISTRATIVE INITIATIVES		
Survey Item	2000/01	2006/07
# campuses implemented Common Management System:		
Financial system	0	22
Human resources system	0	23
Student administration system	0	13
# campuses using consolidated data center	11	23
Consolidated data center cost avoidance	\$-5.7M	\$16.76M

TECHNOLOGY INFRASTRUCTURE INITIATIVES		
<i>Survey Item</i>	<i>2000/01</i>	<i>2006/07</i>
Access Infrastructure		
Campus network downtime - total unplanned hours systemwide (worst month)	195	143
Annual hours intercampus network downtime	5 (2004)	23
Campus workstations meeting CSU hardware standards for:		
Full-time faculty	74%	88%
Part-time faculty	61%	76%
Staff	66%	88%
Students	69%	85%
Campus workstations meeting CSU software standards for:		
Full-time faculty	81%	95%
Part-time faculty	77%	84%
Staff	66%	88%
Students	69%	85%
# "smart" classrooms systemwide with multimedia equipment and network connectivity	792	2,437
Campus Baseline Capability		
	# campuses	# campuses
Percent network outlets meeting CSU connectivity standards:		
75-89 percent	1	3
90-100 percent	0	14
Percent campus workstations meeting current generation hardware and software standards:		
75-89 percent	1	0
90-100 percent	3	10
Percent campus workstations with high speed network access:		
75-89 percent	2	1
90-100 percent	3	19
Percent of technical support services meeting CSU policy standards:		
75-89 percent	5	4
90-100 percent	3	4
Percent of IT training services meeting CSU policy standards:		
75-89 percent	5	4
90-100 percent	0	1

**Table 7B - Technology Use And Satisfaction:
Student, Faculty, and Staff Surveys 2000-2007**

STUDENTS		
Survey Item	2001	2007
IT Global		
Satisfaction with campus computing/technology resources	7.5	7.9
Rating of importance of having electronic access to instruction any time/any place	8.5	8.6
Rating of importance of computer literacy for future employment	9.1	9.3
Rating of campus preparation with technology skills	6.6	7.0
"I am more engaged in courses requiring the use of technology:"		
Strongly agree or agree		47%
Distributed Learning		
Classes taken in last two years requiring Internet use	44%	67%
# classes taken completely online in last two years:	0.3 (2003)	0.5
# classes taken partially online in last two years	1.1 (2003)	1.8
Satisfaction ratings with online courses compared to regular classroom instruction	6.1 (2003)	6.2
Took GE courses completely online in last two years	12% (2005)	11%
Rating of the value of online GE courses	5.3 (2005)	5.2
Administrative Systems		
Uses campus online administrative system for registration information	67%	96%
Uses the campus administrative system for grade information	71%	96%
Uses the campus online administrative system for financial aid information	29%	60%
Uses the campus online administrative system for billing information	20%	66%
Uses the campus online administrative system for degree progress information	22%	62%
Networking		
Owns a computer	94%	95% (2003)
Owns a <i>laptop</i> computer	36% (2003)	74%
Has broadband access at home	80% (2005)	93%
Uses campus wireless network	27% (2005)	51%
Satisfaction rating with campus wireless network	7.5 (2005)	7.7
IT Training		
Uses campus IT training activities or programs	15%	8%
FACULTY		
Survey Item	2000	2006
IT Global		
Importance of computing/network resources for teaching		8.2
Importance of computing/network resources for research		8.8
Satisfaction with computing and technology resources for teaching		7.0
Satisfaction with computing and technology resources for research		6.9
Importance of any time/place electronic access to instruction	5.8	5.5
How well does dept./university prepare students for technology skills in field	6.5	6.8

MOS IX: Conclusion

Survey Item	2000	2006
Impact of IT on quality of student learning		
Very positive		30%
Somewhat positive		56%
Impact of IT on communication with students		
Very positive		55%
Somewhat positive		34%
Impact of IT on communication among students in class		
Very positive		34%
Somewhat positive		44%
Instructional Technology		
No. of classes taught last 2 years in "smart classroom"		7.4
Satisfaction with equipment available in "smart classroom"		7.5
Satisfaction with tech support available in "smart classroom"		7.2
Required students to use spreadsheet programs	36%	50%
Required students to use database programs	24%	34%
Required students to use presentation programs	41%	69%
Required students to use electronic data repositories	30%	33%
Required students to use electronic library resources	60%	75%
Required students to use computer-based instruction/tutorials	28%	36%
Required students to use computer-based simulations and/or animations	24%	29%
Required students to use information websites	60%	74%
Required students to use streaming video presentations	11%	23%
Required students to use specialized software applications	38%	42%
Required students to use project-/team-based activities employing IT	27%	49%
Required students to use a Learning Management System (LMS)		
All classes		36%
Some classes		22%
No classes		42%
Satisfaction with use of LMS for teaching and learning		6.5
Administrative Systems		
Uses campus online information system to get student records	54%	66%
Satisfaction with online access to get student record information	6.6	6.4
Uses online HR Info System to access personal HR information	12% (2004)	20%
Satisfaction with online access to personal HR information	6.7 (2004)	7.1
Networking		
Uses campus wireless network	31% (2004)	49%
Satisfaction with campus wireless network	6.3 (2004)	6.9
IT Support		
Received technical help (last 2 years)	94% (2002)	92%
Satisfaction with time it took to resolve problem	7.1 (2002)	7.7

MOS IX: Conclusion

STAFF		
Survey Item	2000	2006
IT Global		
Importance rating of computing/network resources for own work	9.1	9.4
Satisfaction rating with computing & technology resources	7.5	7.7
Knowledge of computer hardware/software important to job (rating)	7.7 (2005)	7.9
Administrative Systems		
Uses CMS PeopleSoft Financial Information System	50% (2002)	68%
Uses CMS PeopleSoft Human Resources Information System	58% (2002)	83%
Uses CMS PeopleSoft Student Administration Information System	18% (2002)	44%
Workstations		
Satisfaction with university-provided computer workstation	8.2 (2002)	8.5
Satisfaction with university-provided computer software	8.5 (2002)	8.3
Satisfaction with quality of work: set up, maintenance, hardware	7.8 (2002)	8.3
Satisfaction with frequency of workstation upgrade/replacement	7.6 (2004)	7.6
Networking		
Uses remote access to campus network	50%	66%
Satisfaction with remote access to campus network	6.7 (2004)	7.4
Has hi-speed network access from home (cable, DSL)		65%
Uses campus wireless network	24% (2004)	24%
Satisfaction with campus wireless network		7.1
IT Support		
Level of reliance on tech. support to solve computer problems	7.1 (2004)	7.1
Received technical help to solve problem with university-provided computer (last 2 years)	94% (2002)	94%
Satisfaction with time to resolve problem with university-provided computer (last 2 years)	7.9 (2004)	8.0
IT Training		
Importance for campus to offer training	7.6 (2004)	9.1
Uses training workshops	68%	63%
Satisfaction with training resources/program	7.4 (2002)	7.6