

## EXECUTIVE SUMMARY SUMMER 2002 STAFF TECHNOLOGY SURVEY

### Description of Survey

Between June and August 2002 researchers at the Social and Behavioral Research Institute at CSU, San Marcos (SBRI), conducted a telephone survey of a representative sample of California State University non-faculty employees. This survey is the second in a series of biennial studies undertaken to provide information about CSU staff and administrator access to, use of and satisfaction with computing and network resources and services considered to be within the scope of the technology infrastructure as defined in the CSU Integrated Technology Strategy (ITS).

Both the initial survey, administered in summer 2000, and the 2002 survey asked CSU staff and administrators 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) 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 survey with the baseline data permit identification of changes in CSU faculty use of, opinions about and satisfaction with technology resources that may have occurred during the first two years of ITS implementation.

### General Findings

The Staff Technology Survey covers three broad areas: the importance of information technology resources and services, their availability and use, and satisfaction with them.

#### Importance

- ◆ Non-faculty employees in the CSU consider computing and network resources to be extremely important for performing their jobs at the university.
- ◆ CSU staff are reliant on the availability of technical support to solve problems they sometimes experience with their computer or the network.
- ◆ Staff generally agree that it is important for the campus to make available to them resources and opportunities for training in the use of computing equipment and software.

#### Use

- ◆ Over 99 percent of the employees interviewed reported that they use a computer in their work on a daily or almost daily basis.
- ◆ Almost all non-faculty employees (94 percent) report that have received technical support to solve problems with their computer workstations.
- ◆ Between a quarter and one half of CSU staff and administrators say they use a campus administrative information system in connection with their job. About half of this work was performed using Common Management System/PeopleSoft financial records and human resource systems.
- ◆ Less than one fifth of CSU non-faculty employees used technology training resources or participated in technology training activities provided by their campuses in the last two years.

#### Satisfaction

- ◆ Staff report generally high levels of satisfaction with the computing, network, and telecommunications resources provided by the university.
- ◆ Satisfaction with the technical support and technology training provided by the university is moderately high.

- ◆ Staff expressed moderate to low satisfaction with the response time, ease of use and quality of information of the campus financial and human resources information systems. Satisfaction with student information systems was somewhat higher.

#### Changes Since the 2000 Staff Survey

During the two-year interval separating the 2002 survey from the first staff technology survey, over half of the campuses engaged in preparations for shifting from local administrative systems to the CSU Common Management System. By the end of this period, half of the campuses had already implemented some CMS PeopleSoft modules or were beginning implementation. There were no other changes of comparable broad impact on campus staff and administrators during this period. Changes did occur on individual campuses, of course, such as replacement of telephone systems and routine upgrading of computing and network equipment and software. The affect of such local changes cannot distinguished, however, in the aggregate data reported here.

Of the 55 questions in the 2002 survey, 30 were asked in a way that permits comparisons with responses to the 2000 survey. Two thirds of these (23) were positive; i.e., the mean scores or the percentages were in the direction supportive of the importance and use of information technology; 7 changes were in the opposite direction. The magnitude of change was small, however, with only 6 of the changes measuring greater than 5 percentage points or one half point on the zero-to-ten mean score scale. These changes in order of magnitude were as follows:

- ◆ The percentage of staff who access the campus network from home or other remote locations increased just under 10 percentage points (from 50.3 percent in 2000 to 60.2 percent with 99.9 percent of interviewees responding).
- ◆ Use of computer-based training resources increased by 7.6 percentage points (from 47.8 percent to 55.4 percent with 91.1 percent of interviewees responding).
- ◆ The percentage of staff who used no training resources or who participated in no training activities was 5.8 percentage points greater in 2002 (from 13.9 percent to 19.7 percent with 91.1 percent of interviewees responding).
- ◆ Use of the campus Financial Information system increased by 5.1 percentage points (from 33.6 percent to 38.7 percent with 99.1 percent of interviewees responding).
- ◆ Satisfaction with the Human Resources Information system declined by almost two thirds of a point on the mean score scale (from 7.03 in 2000 to 6.39 in 2002).
- ◆ Satisfaction with remote access to the campus network increased by about half a point on the mean score scale (from 6.65 to 7.20).

## SUMMARY OF SURVEY RESULTS

### Survey Sample

A total of 2,154 full-time non-faculty employees from 21 CSU campuses were interviewed. The California Maritime Academy and CSU Channel Islands were excluded because the number of faculty on these campuses is insufficient to provide statistically reliable information. Approximately 100 individuals (from 103 to 119) at each campus participated in the survey.

Survey participants were selected by job classification to reflect the distribution of non-faculty employees on their respective campuses. Employees classified as Skilled Crafts or Service and Maintenance personnel were not included in the survey because their use of information technology tends to be limited to subsets of personnel. The sample population for the 2002 survey matches closely the system profile for the selected job classifications. Variances in the Professional and Managerial classifications are due to differences in the way researchers and the CSU Chancellor's Office classify MPP employees.

**Job Classification**

Rank	CSU Non-Faculty Employees (Fall 01)	Survey Participants (Fall 02)	Over/Under Representation
Professional	45.9%	33.7%	-12.2%
Secretarial/Clerical	27.1%	28.6%	+1.5%
Technical	18.3%	20.7%	+2.3%
Managerial	8.7%	17.1%	+8.4%

Source: Fall 2001 Profile of CSU Employees

**Age and Gender**

Category	CSU Non-Faculty Employees (Fall 01)	Survey Participants (Fall 02)	Over/Under Representation
Average Age	45.1	45.2	+0.4
Male	35.9%	32.9%	-3.0%
Female	64.1%	67.1%	+3.0%

Source: Fall 2001 Profile of CSU Employees

**Ethnicity**

Ethnic Group	CSU Non-Faculty Employees (Fall 01)	Survey Participants (Fall 02)	Over/Under Representation
African American	9.3%	7.9%	-1.4%
Asian & Asian American, Filipino, Pacific Islanders	12.5%	10.4%	-2.2%
Latino/Hispanic	15.8%	14.3%	-1.4%
American Indian (Other Non White)	1.1%	2.7%	+1.6%
White	61.3%	64.7%	+3.4%

Source: Fall 2001 Profile of CSU Employees

## Survey Design

To measure staff access to technology resources and services, interviewers asked participants yes/no questions about the availability to them and/or their use of specific computing and network technologies and services. Respondents who reported use of these resources or services were then asked to rate their satisfaction with each resource or service on a zero-to-ten scale where zero means "not at all satisfied" and ten means "completely satisfied." Staff were also asked for their opinion about general issues related to the use of information technology in connection with their work at the university.

## Survey Results

Almost all of the employees who were interviewed responded to the questions asked. Close to 100 percent of the survey participants gave answers to questions asking for their opinions or about the availability or use of specific technology resources and services. Replies to questions about satisfaction correspond to the numbers of persons who had personal experience with the resource or service in question. Information about responses to each item in the survey is displayed in the Appendix.

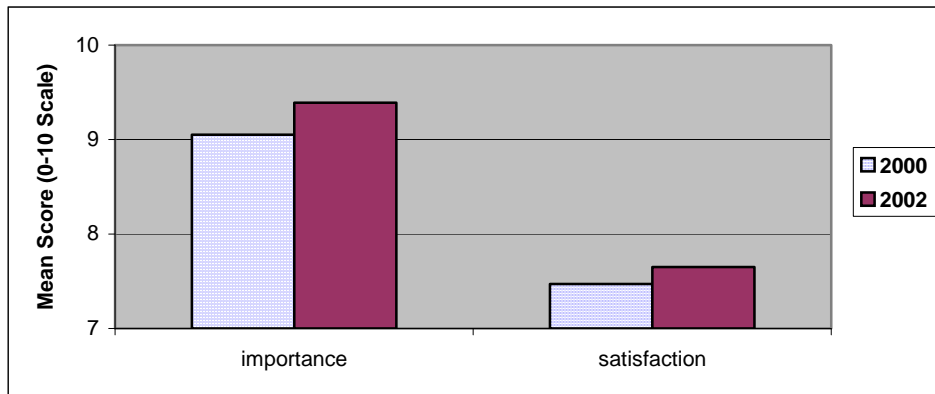
## Information Technology Issues

Consensus is very strong among CSU employees on the importance of computing and information network resources to their ability to carry out their work at the university. Responses to this question represent the highest ratings for all items in 2002 survey (mean score 9.39/SD 1.21 with 99.8 percent of all interviewees responding). This marks a gain of one third of a point over the response to this question in the 2000 survey (mean score 9.05/SD 1.63). (See the bar graph below.)

The high importance assigned to technology access is consistent with its actual use. When asked how often they use a computer, 2142 of the 2154 persons interviewed (99.4 percent) reported that they use a computer “almost daily”.

Overall staff satisfaction with the computing and technology resources available to them was moderately high (mean score 7.65/SD 1.75). The level of satisfaction is somewhat higher than it was two years earlier (mean score 7.47/SD 2.00).

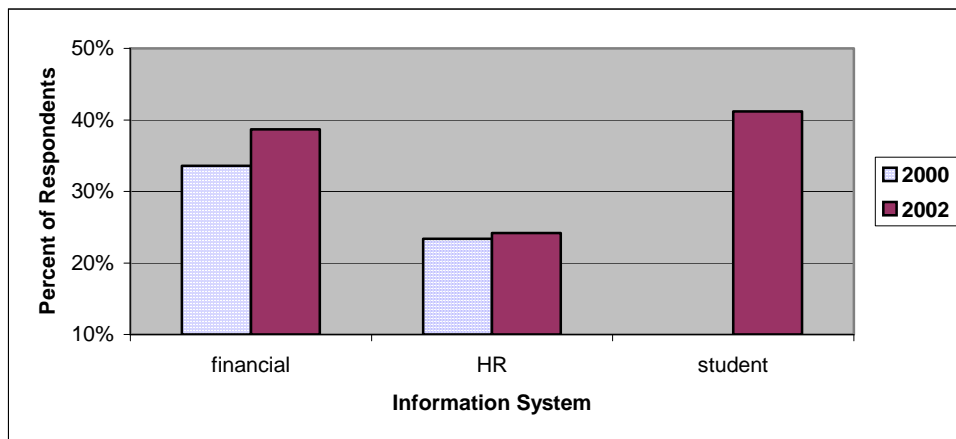
### Attitudes Toward Information Technology



### Administrative Information Systems

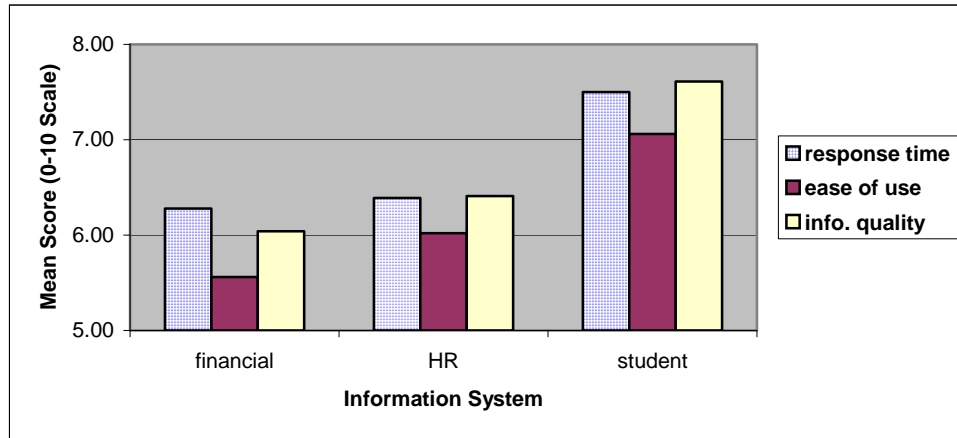
Currently, less than one half of CSU staff and administrators use an administrative information system. The number of information system users is expected to rise significantly over the next few years as more campuses implement the CSU Common Management System. At the time staff were interviewed for the 2002 survey, eleven campuses were using the CMS human resources system (in whole or in part) and ten campuses were using the financial information system (in whole or in part). Three campuses were using portions of the student information system. No CMS information systems were in operational use at the time the 2000 survey was conducted. The bar graphs below profile use of all information systems in 2000 and the extent to which CMS systems were in use (in whole or in part) in 2002.

### Use of Administrative Information Systems

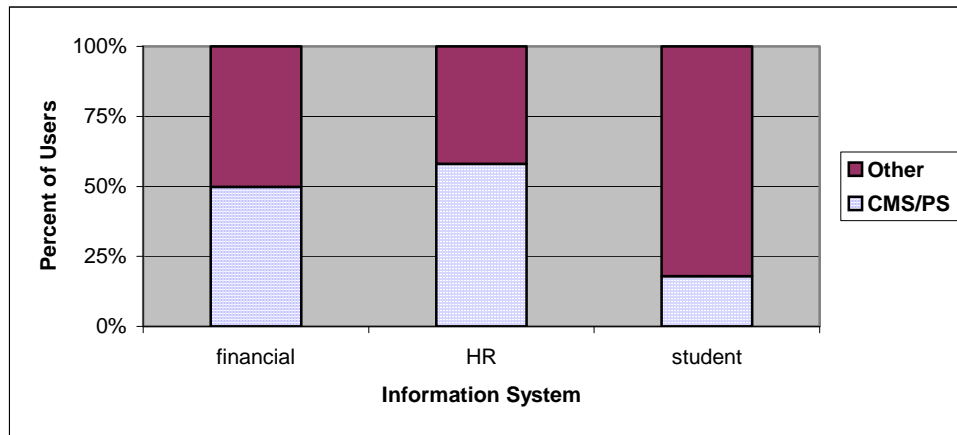


Staff satisfaction with key aspects of information systems they were using in 2002 is shown in the following bar graph. The consistently lower ratings for ease of use may reflect, at least in part, unusual demands associated with learning to use the new CMS software applications.

### Satisfaction with Administrative Information Systems (2002)



### 2002 Use of CMS/PeopleSoft Information Systems

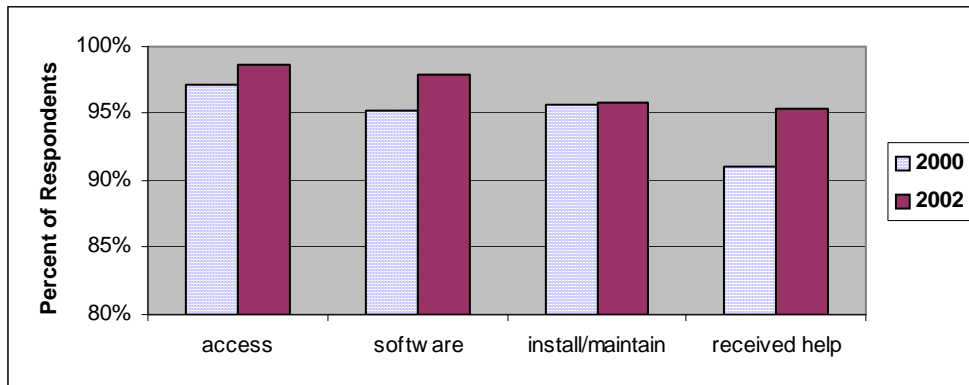


## Technology Resources and Services

### Workstation Environment

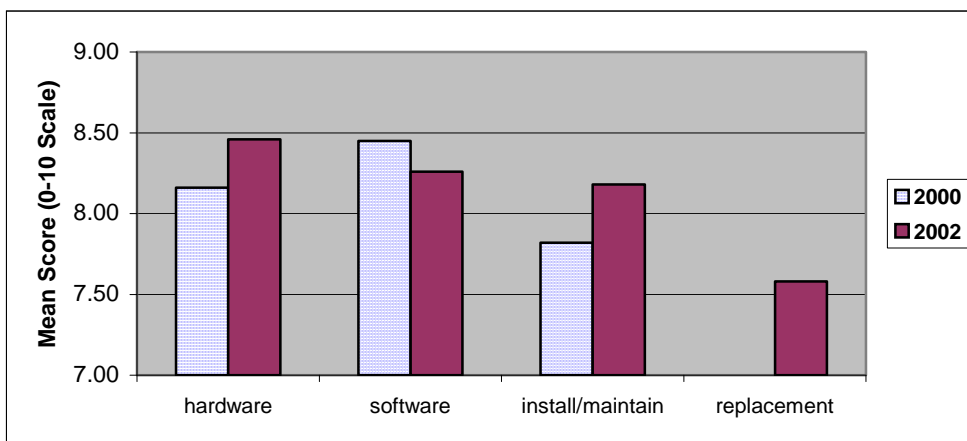
Essentially all CSU non-faculty employees whose work requires it have access to a computer workstation and to assistance with installation and routine maintenance or upgrading of hardware and software. The bar graph below summarizes responses to questions in the 2000 and 2002 surveys about access to a computer workstation, to the software needed in their work, and to assistance with hardware and software installation and maintenance.

### Workstation Access



Staff satisfaction with the quality of the computer workstation, with the installation and maintenance support they have received, and with the rate at which obsolete equipment and software is updated or replaced remains relatively high, as shown in the bar graph below. (The 2000 survey did not include a question about replacement.) Satisfaction with the software available to them declined somewhat, but remained relatively high (mean score 8.26/SD 1.69, down from 8.45/SD 1.55 in the 2000 survey).

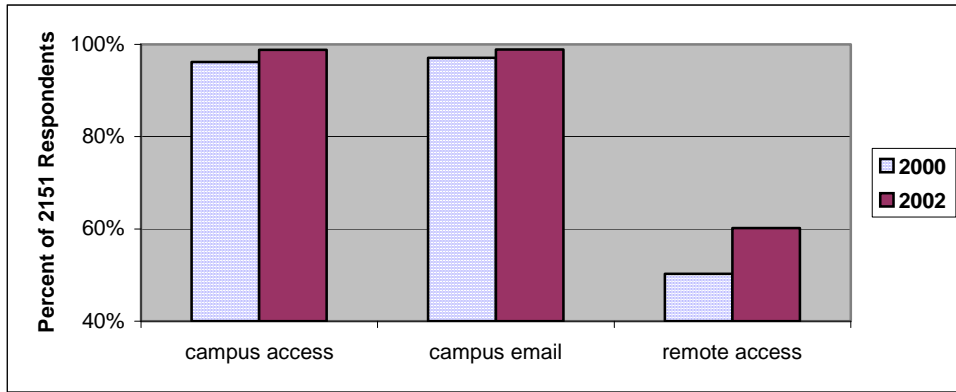
### Workstation Satisfaction



### Network Access

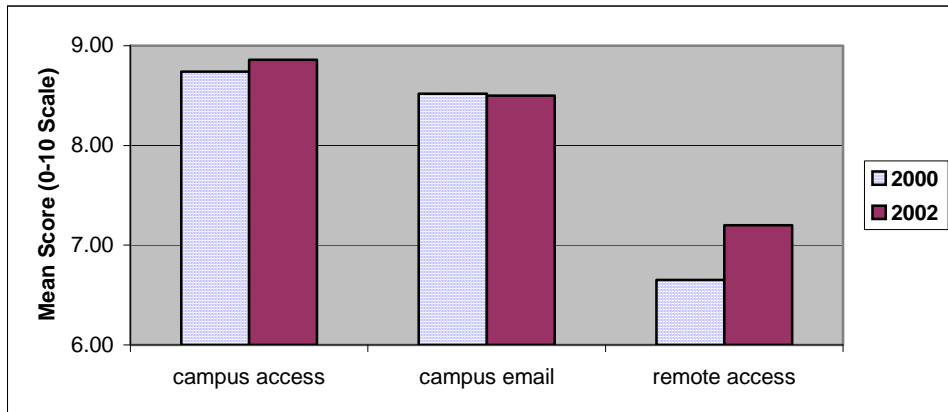
The operations of CSU campuses have become increasingly dependent on networked computers and computerized information management systems. Improvement in the ability to access and to use the campus network is, therefore, a key measure of success for the ITS Technology Infrastructure Initiative. As noted in the following bar graph, use of the campus network and of the campus email system(s) has increased slightly above the already very high level reported in the 2000 survey. There was also a ten percentage point increase in the number of staff who access the network from home or other off-campus locations.

### Network Access



Satisfaction with network access and with campus email remains at about the same level as observed in the 2000 survey. Satisfaction with remote access, however, went up about one half of a point (on an 11-point scale).

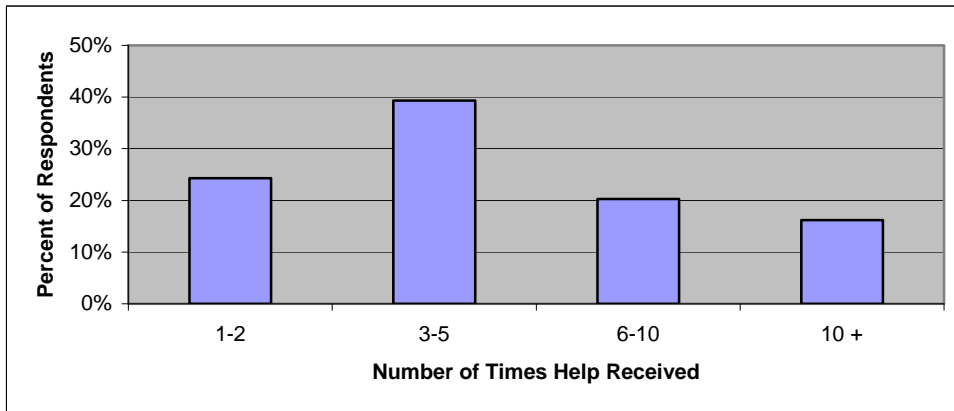
### Network Satisfaction



### Technical Support

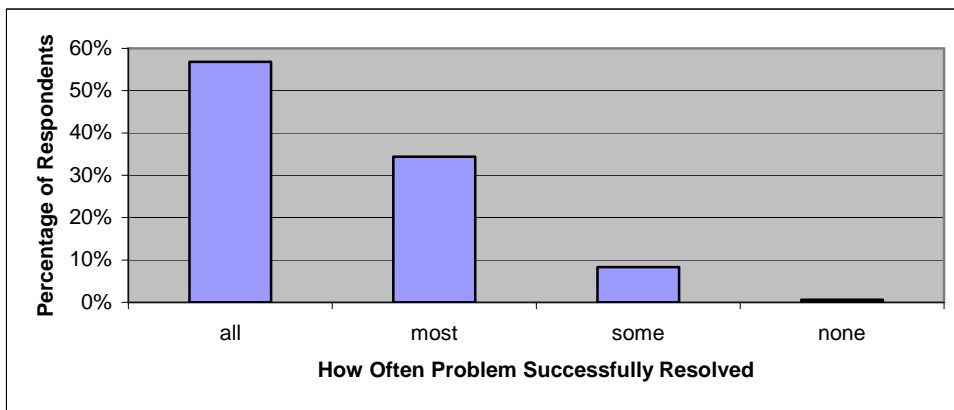
Almost all staff (97.5 percent) report that they have access to technical assistance if they experience a problem with the computer or software provided by the university. They are quite highly reliant on the availability of technical support for solving problems with their computers (mean score 7.07/SD 2.70 on 0-10 scale). Almost all staff also report that they received such help (94 percent), most on more than one occasion. Following is a bar graph displaying the responses of interviewees to the question about how many times they had actually received technical assistance in the past two years.

### Frequency of Technical Support



Staff appear to be generally satisfied with the time it took to solve problems with their computers or software. Responses to the question about satisfaction averaged 7.86 (SD 2.07) on a 0 to 10 scale where 0 means “not at all satisfied” and 10 means “completely satisfied”. The level of satisfaction is consistent with pattern of reported successful problem resolution, as profiled below.

### Quality of Problem Resolution



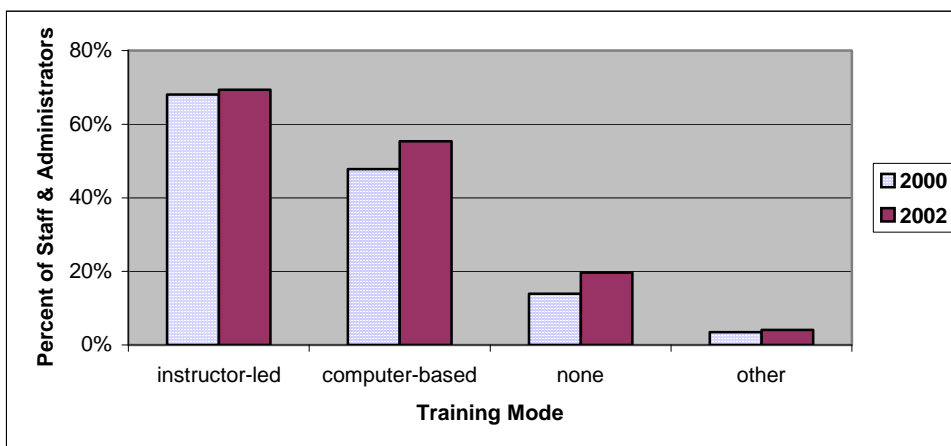
### Technology Training

For the first time staff were asked how knowledgeable they thought they were with respect to the computer hardware and software they use on the job. On a scale where 10 means “extremely knowledgeable” and 0 means “not at all knowledgeable,” the mean score was 7.72/SD 1.65, indicating a moderate level of confidence in their ability to use the technologies required to perform their work.

Interviewers also asked staff how important they felt it was for the campus to provide technology training. Responses to this question suggest that access to technology training is of moderate importance to most staff (mean score 7.61/SD 1.86).

Over one half of CSU non-faculty employees participated in some form of technology training, as shown in bar graph below.

### Participation in Technology Training

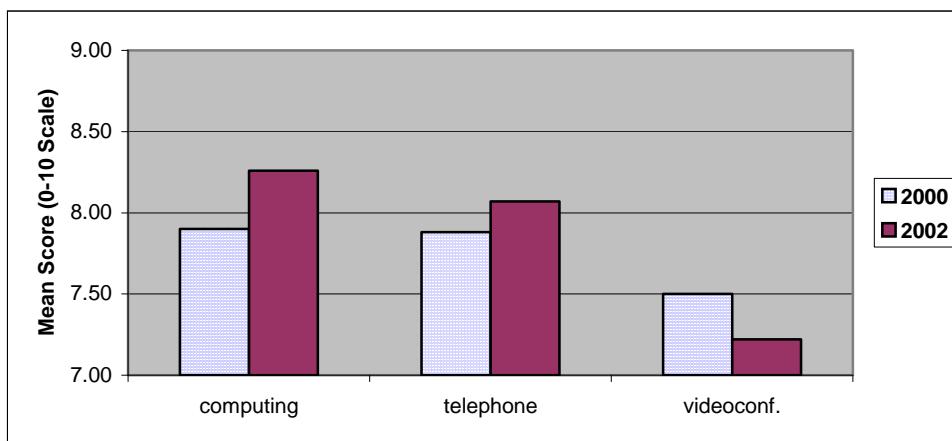


A moderate level of satisfaction with the training resources or experiences was expressed by about 80 percent of the persons interviewed (mean score 7.61/SD 2.08).

### General Satisfaction with Technology Equipment

Staff expressed somewhat greater satisfaction with the condition and capabilities of the computing and telecommunications equipment available to them than in 2000 except for videoconferencing equipment. Computers and telephones are used by almost all staff. Just over one third of the respondents report using videoconference equipment and facilities.

### General Satisfaction with Technology Equipment



# Summer 2002 Staff Technology Survey Responses

Item ID	Question	Number	% of All	SD	Mean	Signif.†	Yes (%)	Change	No(%)	Change
<b>Global</b>										
<b>General</b>										
QGLOB2	Importance of computing/network resources for own work	2153	100.0%	1.21	9.39	<u>0.34</u>	***			
		2316	99.8%	1.63	9.05					
QGLOB3	Satisfaction with computing & technology resources	2149	99.8%	1.75	7.65	<u>0.18</u>	***			
		2304	99.3%	2.00	7.47					
QGLOB4	Aware of efforts to improve campus computing/network resources	2128	98.8%				**	85.2%	-3.0%	14.8%
		2296	99.0%					88.2%		11.8%
QGLOB5	How much have these efforts improved conditions for you	1735	80.5%	2.34	6.67	<u>-0.05</u>	ns			
		1987	85.6%	2.29	6.72					
QUSE1	Frequency of computer use	2154	100.0%							
	almost daily	2142	99.4%							
	weekly	7	0.3%							
	monthly	2	0.1%							
	1x sem./qtr.	0	0.0%							
	almost never	2	0.1%							
	never	1	0.0%							
Q4A9	Knowledge of computer hardware/software important to job	2146	99.6%	1.65	7.72	<u>7.72</u>				
<b>Administrative IS 3A</b>										
<b>Financial</b>										
QI3B1	Use campus Financial Information System in own work	2133	99.0%				***	38.7%	<u>5.1%</u>	* 61.3%
		2298	99.1%					33.6%		66.4%
Q3B1B	Satisfaction with Financial Info. System: response time	812	37.7%	2.65	6.28	<u>-0.42</u>	**			
		713	30.7%	2.35	6.70					
Q3B1C	Satisfaction with Financial Info system: ease of use	812	37.7%	2.71	5.56	<u>5.56</u>				
Q3B1D	Satisfaction with Financial Info System: quality of information	809	37.6%	2.61	6.04	<u>6.04</u>				
Q3B1PS	Used CMS PeopleSoft Financial Information System	786	36.5%					49.9%	<u>49.9%</u>	* 50.1%
										<u>50.1%</u>

†The relative significance of changes in responses between the 2000 survey and the 2002 survey is indicated by asterisks:

\* The probability that the observed change is attributable to substantive, not random, factors is from 95% to 98%;

\*\* The probability that the observed change is attributable to substantive, not random, factors is 99% or greater;

\*\*\* The chances that the observed change is due to random rather than substantive factors is 1 in 1,000 or less;

ns The change was not statistically significant.

Absence of an indication of significance means the 2000 survey did not include a comparable question, or that the number of responses was insufficient for statistical analysis.

<u>Item ID</u>	<u>Question</u>	<u>Number</u>	<u>% of All</u>	<u>SD</u>	<u>Mean</u>	<u>Change</u>	<u>Signif.†</u>	<u>Yes (%)</u>	<u>Change</u>	<u>No(%)</u>	<u>Change</u>
<b>Human Resources</b>											
Q13B2	Use campus HR Information System in own work	2134 2303	99.1% 99.3%				ns	24.2% 23.4%	0.8% 76.6%	75.8%	-0.8%
Q3B2B	Satisfaction with HR Info System: response time	502 481	23.3% 20.7%	2.59 2.13	6.39 7.03	-0.64	***				
Q3B2C	Satisfaction with HR Info System: ease of use	500	23.2%	2.55	6.02	6.02					
Q3B2D	Satisfaction with HR Info System: quality of information	499	23.2%	2.45	6.41	6.41					
Q3B2PS	Used CMS PeopleSoft Human Resources Information System	475	22.1%					58.1% 58.1%	* 41.9%	41.9%	41.9%
<b>Student Information</b>											
Q3B3	Uses campus student administration information system	2136	99.2%					41.2% 41.2%	* 58.8%	58.8%	58.8%
Q3B3C	Satisfaction with Student Admin. Info System: ease of use	865	40.2%	2.36	7.06	7.06					
Q3B3D	Satisfaction with Student Admin. Info System: quality of information	863	40.1%	2.08	7.61	7.61					
Q3B3B	Satisfaction with Student Admin. Info System: response time	865	40.2%	2.23	7.50	7.50					
Q3B3PS	Used CMS PeopleSoft Student Administration Information System	824	38.3%					18.0% 18.0%	* 82.0%	82.0%	82.0%

### Workstation Access 4A

<b>Hardware</b>											
Q4A1	Access to a university-provided computer workstation	2152 2319	99.9% 100.0%				***	98.7% 97.2%	1.5% 2.8%	1.3%	-1.5%
Q4A1C	Satisfaction with university-provided computer workstation	2119 2252	98.4% 97.1%	1.71 1.97	8.46 8.16	0.30	***				
<b>Software</b>											
Q4A2	Access to university-provided computer software	2116 2253	98.2% 97.1%				***	97.9% 95.2%	2.7% 4.8%	2.1%	-2.7%
Q4A2C	Satisfaction with university-provided computer software	2068 2138	96.0% 92.2%	1.69 1.55	8.26 8.45	-0.19	***				
<b>Installation/Maintenance</b>											
Q4A3	Access to help to set up, upgrade... univ.-provided computer equipment	2120 2247	98.4% 96.9%					95.8% 95.7%	0.1% 4.3%	4.2%	-0.1%

Item ID	Question	Number	% of All	SD	Mean	Change	Signif.†	Yes (%)	Change	No(%)	Change
Q4A3B	Received help to set up, upgrade,...univer.-provided computer equipment	2023 2148	93.9% 92.6%				***	95.3% 91.0%	4.2% 9.0%	4.7%	-4.2%
Q4A3C	Satisfaction with quality of work: set up, maintain... hardware	1924 1952	89.3% 84.1%	1.82 2.05	8.18 7.82	0.36	***				
Q4B5C	Satisfaction with frequency of workstation upgrade/replacement	2074	96.3%	2.18	7.58	7.58					

### Network Access 4B

#### General

Q4B1A	Used campus access to Internet/Web	2151 2318	99.9% 99.9%				***	98.8% 96.2%	2.6% 3.8%	1.2%	-2.6%
Q4B1B	Satisfaction with campus access to Internet	2123 2224	98.6% 95.9%	1.34 1.48	8.86 8.74	0.12	**				
Q4B2A	Used campus email services	2153 2320	100.0% 100.0%				***	98.9% 97.1%	1.8% 2.9%	1.1%	-1.8%
Q4B2B	Satisfaction with campus access to email services	2127 2249	98.7% 96.9%	1.63 1.66	8.50 8.52	-0.02	ns				
Q4B3A	Used remote access campus network	2151 2304	99.9% 99.3%				***	60.2% 50.3%	9.9% *	39.8%	-9.9%
Q4B3B	Satisfaction with remote access to campus network	1285 1145	59.7% 49.4%	2.21 2.39	7.20 6.65	0.55	***				

#### Mode

Q4B3MOD	Mode used for remote access to campus network	1266	58.8%								
	modem	554	43.8%								
	cable	118	9.3%								
	DSL	133	10.5%								
	ISDN	14	1.1%								
	ISP	447	35.3%								

### Tech Support 4A

#### General

Q4A5	Access to help solve problems with univer.-provided computer or software	2119 2243	98.4% 96.7%				ns	97.5% 97.2%	0.3% 2.8%	2.5%	-0.3%
Q4A5E2	Received technical help to solve problem with univ.-provided computer	2061	95.7%					94.0%	94.0%	6.0%	6.0%

<u>Item ID</u>	<u>Question</u>	<u>Number</u>	<u>% of All</u>	<u>SD</u>	<u>Mean</u>	<u>Change</u>	<u>Signif.†</u>	<u>Yes (%)</u>	<u>Change</u>	<u>No(%)</u>	<u>Change</u>	
Q4A5E3	No. of times tech help received	1924	89.3%									
			1 - 2	467	24.3%							
			3 - 5	756	39.3%							
			6 - 10	390	20.3%							
			>10	311	16.2%							
Q4A5E4	No. of times problems with univ.-provided computer satisfactorily resolved	1932	89.7%									
			all times	1097	56.8%							
			most times	664	34.4%							
			some times	160	8.3%							
			none	11	0.6%							
Q4A5E5	Satisfaction with time to resolve problem with univ.-provided computer	1921	89.2%	2.07	7.86	<u>7.86</u>						
Q4A5E7	Level of reliance on tech. support to solve computer problems	2056	95.5%	2.70	7.07	<u>7.07</u>						
	<b>Departmental Service</b>											
Q4A5E6	Tech. help provided by employee/colleague in department/unit	1929	89.6%					61.0%	<u>61.0%</u>	*	39.0%	<u>39.0%</u>

### Training 4A

<b>General</b>													
Q4A8A_9	Used no training resources/programs	2153	100.0%					***	19.7%	<u>5.8%</u>	*	80.3%	<u>-5.8%</u>
		2113	91.1%										
Q4A8A1A	Satisfaction with training resources/program	1729	80.3%	1.86	7.61	<u>0.26</u>							
		1006	43.4%	2.08	7.35								
Q4A7	Importance for campus to offer	1729	80.3%	1.86	7.61	<u>7.61</u>							
<b>Mode</b>													
Q4A8A_1	Used computer-based training resources	2153	100.0%					***	55.4%	<u>7.6%</u>	*	44.6%	<u>-7.6%</u>
		2113	91.1%										
Q4A8A_3	Used training workshops	2153	100.0%					ns	69.4%	<u>1.4%</u>		30.6%	<u>-1.4%</u>
		2113	91.1%										
Q4A8A_8	Used "other" training resources	2153	100.0%					ns	4.1%	<u>0.5%</u>		95.9%	<u>-0.5%</u>
		2113	91.1%										
Q4A8A_4	Used online training	2140	99.4%						0.7%	<u>0.7%</u>			
Q4A8A_5	Used self-paced training	2143	99.5%						0.5%	<u>0.5%</u>			
Q4A8A_6	Used one-on-one training	2124	98.6%						1.4%	<u>1.4%</u>			

### Equipment 4A

<u>Item ID</u>	<u>Question</u>	<u>Number</u>	<u>% of All</u>	<u>SD</u>	<u>Mean</u>	<u>Change</u>	<u>Signif.†</u>	<u>Yes (%) Change</u>	<u>No (%) Change</u>
	<b>Mode</b>								
Q4A10A	Satisfaction with condition/capabilities of computing equipment	2120 2240	98.4% 96.6%	1.61 1.76	8.26 7.90	<u>0.36</u>			
Q4A9B	Satisfaction with condition/capabilities of telephone equipment	2149 2313	99.8% 99.7%	1.86 1.91	8.07 7.88	<u>0.19</u>	***		
Q4A9C	Satisfaction with condition/capabilities of video conferencing equipment	768 873	35.7% 37.6%	2.14 2.13	7.22 7.50	<u>-0.28</u>			