

EXECUTIVE SUMMARY

SUMMER 2006 STAFF TECHNOLOGY SURVEY

Description of Survey

In the spring and summer of 2006, 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 fourth in a series of biennial studies undertaken to provide information about CSU staff and administrator attitudes toward, 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).

The initial survey, administered in summer 2000, the second and third surveys conducted in 2002 and 2004, and this 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 2006 survey with those from the previous administrations permit identification of changes in CSU staff use of, opinions about, and satisfaction with technology resources that have occurred during ITS implementation.

The six-year period covered by these surveys has been 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 card catalogs 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/PeopleSoft systems, for example, are now Web-based or soon will be when system upgrades are completed.

Use of the World Wide Web has so deeply permeated the operations of CSU campuses that ability to use Web tools effectively must be regarded as an essential skill for non-faculty employees. A new set of questions focusing on local (i.e., departmental or office) Web use was added to the 2006 survey to gain a better understanding of reliance on Web applications and the kind and level of related support and training available to staff. The 2006 survey also asked staff specifically about support and training to use CMS/PeopleSoft information systems.

In addition to new items on Web use and CMS/PeopleSoft training, the 2006 survey included a new question related to campus contingency planning. The progressive conversion of the means by which work is accomplished from stand-alone tools and fixed venues to integrated, networked environments has, together with ubiquitous access to broadband technology, created the conditions for carrying out job-related tasks from locations other than the traditional worksite. As a first step toward assessing the feasibility of maintaining the continuity of university operations in the event of an emergency that would prevent individuals from traveling to campus, the 2006 survey asked employees to estimate how much of the work they do on campus could be done using computers, telephones and mail services available to them at home or elsewhere.

Findings

In the 2006 staff technology survey SBRI researchers asked a representative sample of CSU non-faculty employees about their access to, use of and satisfaction with:

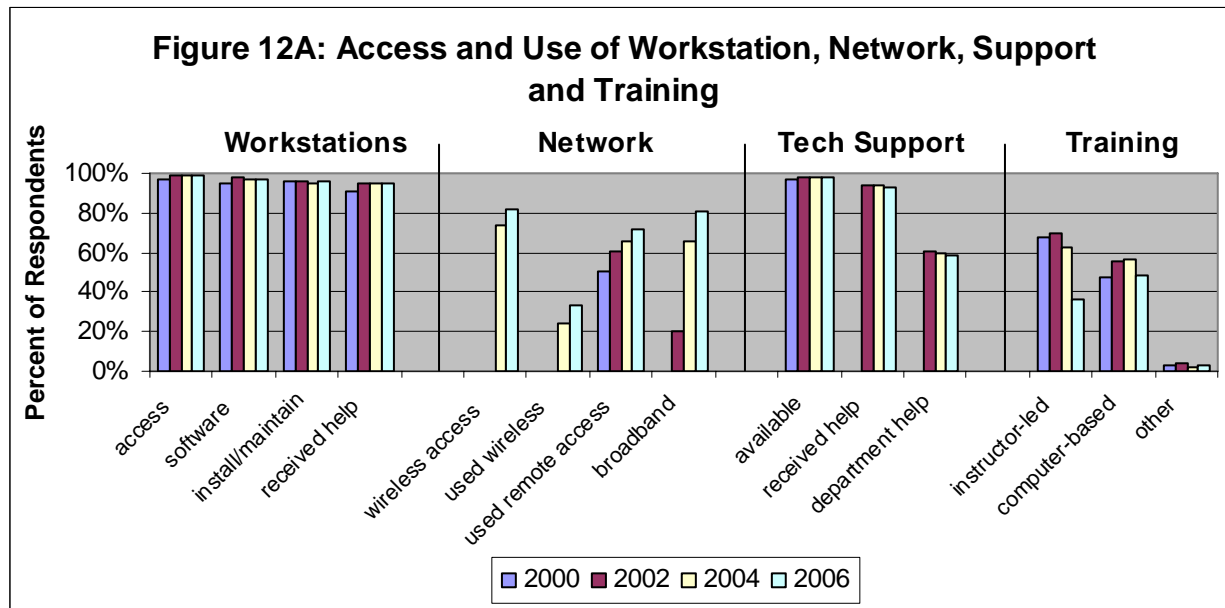
- computer workstations, the campus network and the Internet, and technical support and training services;
- administrative information systems with particular emphasis on CMS/PeopleSoft applications;
- World Wide Web applications they use in connection with performing their jobs.

Workstation Environment, Network Connectivity Support and Training Services

Access and Use

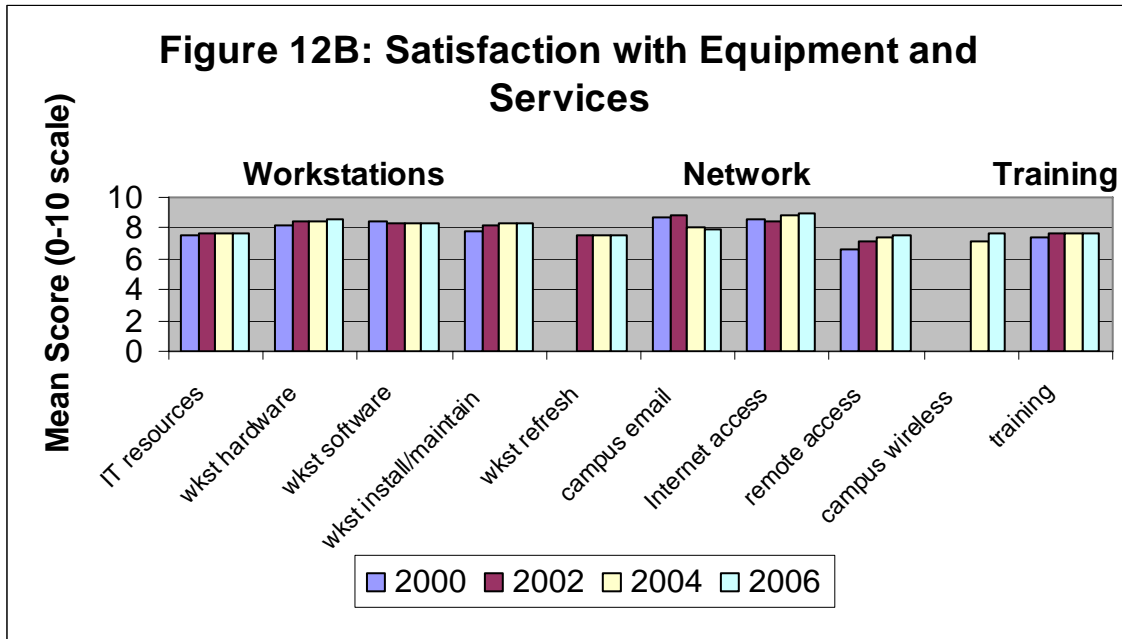
- There has been little change in access to workstations and technical support since 2000;
- Accessing both the campus network and the Internet from off-campus locations has increased continually;
- Fully 80 percent of staff have high speed connections at home (cable, DSL);
- Both access to and use of wireless networks on campus have increased, together with the number of staff/administrators who use a laptop computer (just over 20 percent in 2006, up from 15 percent in 2004);
- Participation in basic technology training has decreased.

Figure 12A summarizes staff and administrator access to and use of basic information technology resources and services.



Satisfaction

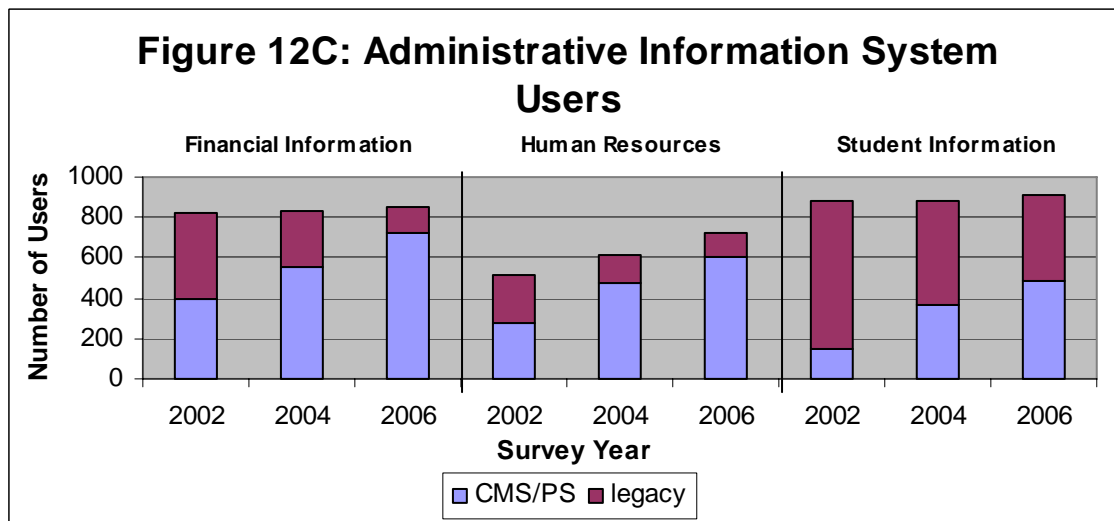
Staff and administrator satisfaction with the technology equipment and services provided by the campuses has been remarkably high and stable across all four administrations of the survey. Modest change is evident in the area of network connectivity. Satisfaction with Internet access from both on campus and off has grown, as has satisfaction with wireless access, while ratings for campus email have declined slightly. Figure 12B profiles these ratings.



Administrative Information Systems

Use

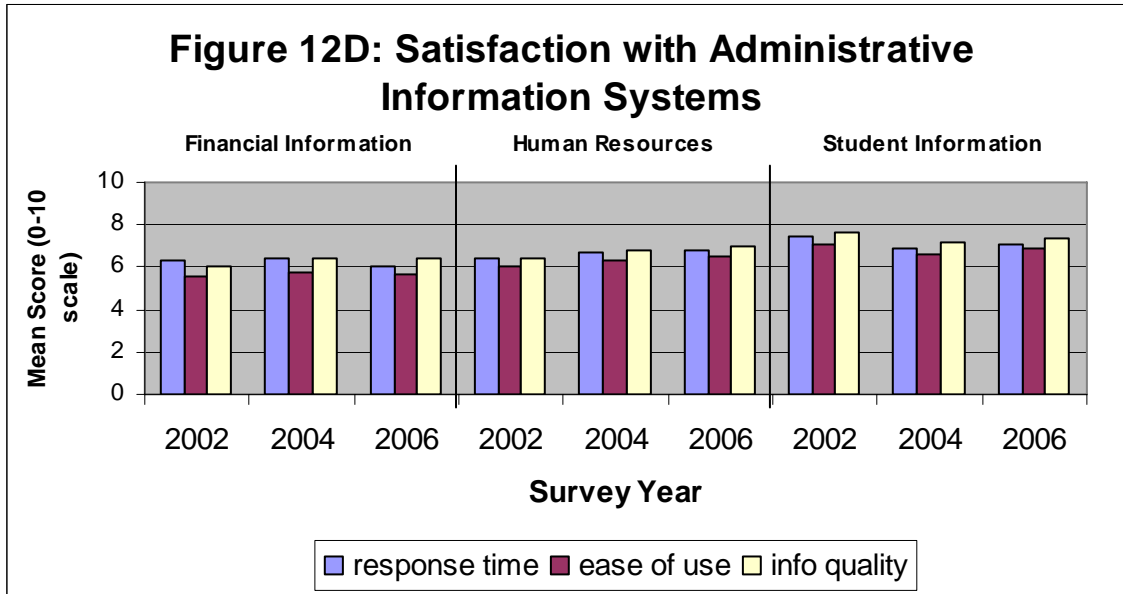
Staff and administrator use of computerized campus financial information and student records systems has not changed significantly since 2002, but the number of employees using computerized human resources systems grew by about 100 persons for each successive survey administration. The most striking change is the increase in the number of staff who report using a CMS/PeopleSoft application. Figure 12C summarizes these changes.



Satisfaction

Little or no change was observed in satisfaction scores for campus computerized information systems in terms of ease of use, quality of information, or response time, as shown in Figure 12D. These data combine both legacy and CMS/PeopleSoft systems. Obviously, the issue is more complex because some campuses have fully implemented some or all of the CMS/PeopleSoft modules and others are at later stages of implementation, so their ratings are based primarily on legacy systems. A breakdown by CMS versus legacy systems showed that legacy users always

gave higher satisfaction ratings but not all differences were statistically significant. For the finance system, the only significant difference was for speed and response time. There were no significant differences for the human resources application. For the student administration system, all three satisfaction criteria (ease of use, quality of the information, and speed or response time) were significantly higher for users of legacy systems. According to national studies, satisfaction with new ERP implementations is usually lower than for legacy systems in the initial stages.



CMS/PeopleSoft Training

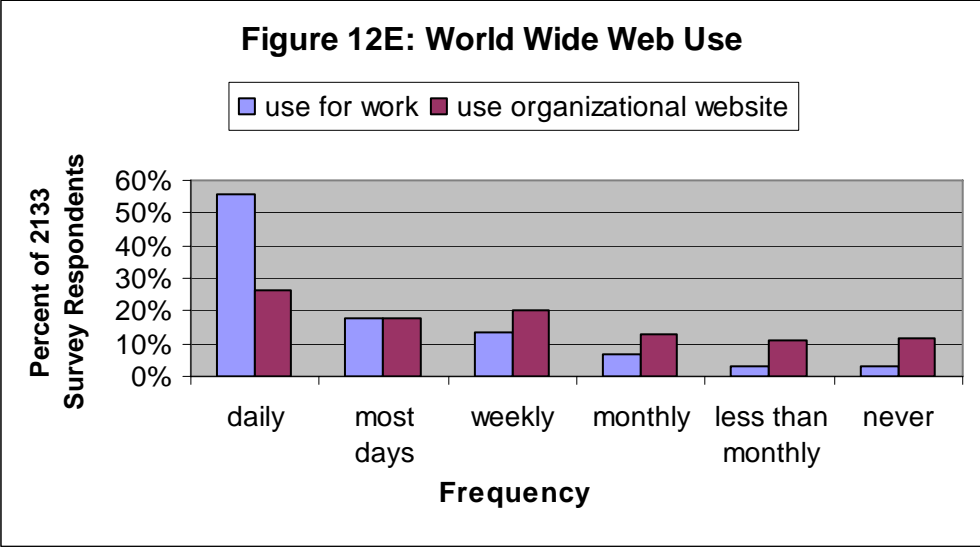
Of the employees who use CMS/PeopleSoft applications, most (88.7%) said that they received training or help with the system. Formal training occurred primarily in the form of on-campus group instruction. About half of these employees reported receiving informal help in lieu of or in addition to formal training. Staff who participated in formal training and who received informal help rated informal help as “more useful” (mean score = 8.11) than formal training (mean score = 7.28). Informal help occurred in a variety of modes:

- 61.1% received face-to-face, one-on-one help from a peer or technical support person;
- 51.9% got help from co-workers via e-mail or telephone;
- 47.6% got help from campus tech support by phone or e-mail.

Departmental Website Use and Management

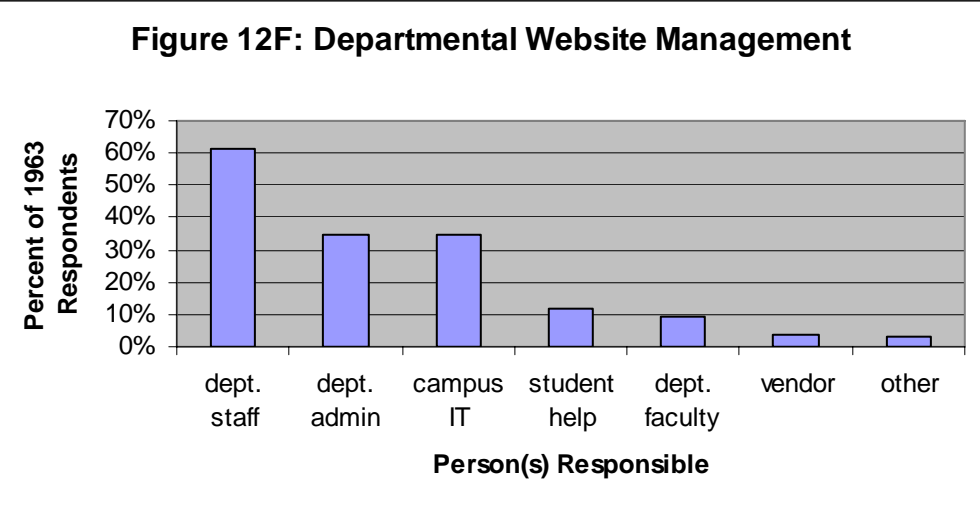
Access and Use

The results of the 2006 survey make very clear that the World Wide Web is, in fact, a primary tool for communication and for carrying out work-related tasks. More than nine out of ten survey respondents said that the department or office in which they worked maintained its own Web site. More than half use the Web daily; almost half use the departmental Website daily or almost daily. Figure 12E summarizes the frequency of use of the World Wide Web and of the departmental or office Website.



Website Management

Academic and administrative departments and offices vary in the way they design and maintain Websites, as does the degree of central campus control or support. Predominantly, departments have assumed responsibility for setting up and updating their own Websites. Only one-third of the respondents said their Websites had been designed or were being maintained by the central campus IT office, external vendors or other service providers. A third of those surveyed said that they were one of the people responsible for updating information on their organizational Website, but only one in three of that group received formal training on how to design or maintain a Website. Figure 12F provides an overview of the human resources departments and offices employed to create and maintain a departmental or office Website.

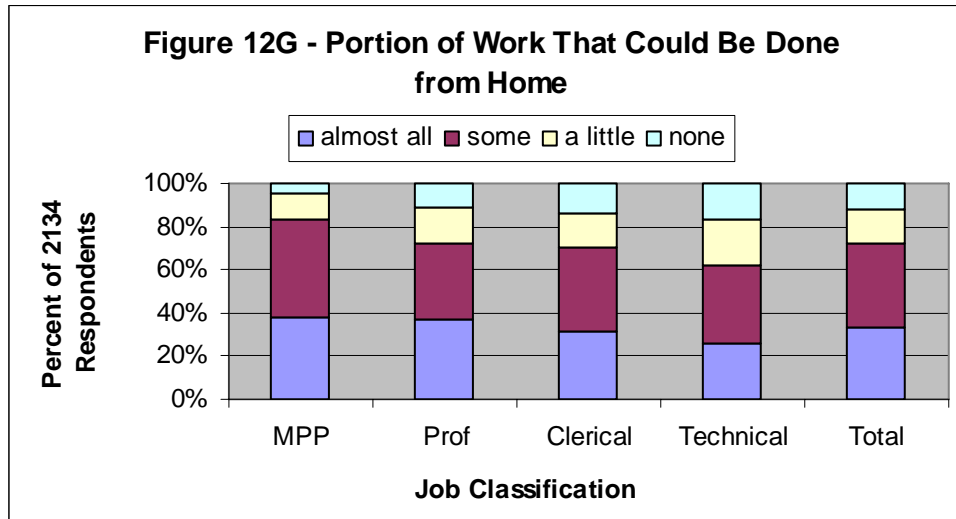


Satisfaction

Staff are generally positive (mean score = 7.63) about the usefulness of their office Web site. They are less satisfied, however, (mean score 6.88) with the Web training they have received.

Contingency Planning

One third of employees said that they could do “almost all” of their work from home. Only 11.7 percent said they could do “none” of their work away from campus. Figure 12G displays the responses to the question about ability to do work from home.



Survey Sample

A total of 2,146 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. More than 100 interviews were conducted at each campus.

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. The sample population for the 2004 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 2005)	Survey Participants (Summer 2006)	Over/Under Representation
Professional	49.4%	37.9%	--11.6%
Secretarial/Clerical	25.6%	27.2%	+1.7%
Technical	16.6%	17%	+0.4%
Managerial	8.4%	17.9%	+9.5%

Source: Fall 2003 Profile of CSU Employees

Age and Gender

Category	CSU Non-Faculty Employees (Fall 03)	Survey Participants (Summer 04)	Over/Under Representation
Male	35.7%	35.3%	-0.4%
Female	64.3%	64.7%	+0.4%

Source: Fall 2003 Profile of CSU Employees

Summer 2004 Staff Technology Survey Responses

Item ID	Question	Number	% of All	SD	Mean	Change	Signif.†	Yes (% pt.)	Change	No (% pt.)	Change
Global											
General											
QGLOB2	Importance of computing/network resources for own work	2143	1.21	9.43	<u>0.00</u>						
		2143	99.9%	1.21	9.43	0.04	ns				
		2153	100.0%	1.21	9.39	0.34	***				
		2316	99.8%	1.63	9.05						
QGLOB3	Satisfaction with computing & technology resources	2136	1.78	7.70	<u>0.00</u>						
		2136	99.5%	1.78	7.70	0.05	ns				
		2149	99.8%	1.75	7.65	0.18	**				
		2304	99.3%	2.00	7.47						
Q4A9	Knowledge of computer hardware/software important to job	2127	1.55	7.86	<u>0.00</u>						
		2127	99.1%	1.55	7.86	0.14	**				
		2146	99.6%	1.65	7.72						

Administrative IS 3A

Financial											
QI3B1	Use campus Financial Information System in own work	2126						39.0%	<u>0.0%</u>	61.0%	<u>0.0%</u>
		2126	99.1%				***	39.0%	0.3%	61.0%	-0.3%
		2133	99.0%				***	38.7%	5.1%	61.3%	-5.1%
		2298	99.1%					33.6%		66.4%	
Q3B1B	Satisfaction with Financial Info. System: response time	801	2.57	6.45	<u>0.00</u>						
		801	37.3%	2.57	6.45	0.17	ns				
		812	37.7%	2.65	6.28	-0.42	**				
		713	30.7%	2.35	6.70						
Q3B1C	Satisfaction with Financial Info system: ease of use	812	2.59	5.77	<u>0.00</u>						
		812	37.8%	2.59	5.77	0.21	ns				
		812	37.7%	2.71	5.56						
Q3B1D	Satisfaction with Financial Info System: quality of information	809	2.47	6.38	<u>0.00</u>						
		809	37.7%	2.47	6.38	0.34	**				
		809	37.6%	2.61	6.04						

†The relative significance of changes in responses between the surveys of 2000 (bottom row, in red), 2002 (near bottom row, in blue), 2004 (below top row, in purple), and 2006 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 change between survey administrations did not include a comparable question, or that the number of responses was insufficient for statistical analysis.

Absence of data from previous survey administrations results when questions are added to the survey or their content is modified to preclude longitudinal comparisons.

<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 (% pt.)</u>	<u>Change</u>	<u>No (% pt.)</u>	<u>Change</u>
Q3B1PS	Used CMS/PeopleSoft Financial Information System	807						68.2%	<u>0.0%</u>	31.8%	<u>0.0%</u>
		807	37.6%					68.2%	<u>18.3%</u>	31.8%	<u>-18.3%</u>
		786	36.5%					49.9%		50.1%	
Human Resources											
Q3B2	Use campus HR Information System in own work	2125						28.9%	<u>0.0%</u>	71.1%	<u>0.0%</u>
		2125	99.0%				***	28.9%	<u>4.7%</u>	71.1%	<u>-4.7%</u>
		2134	99.1%				ns	24.2%	<u>0.8%</u>	75.8%	<u>-0.8%</u>
		2303	99.3%					23.4%		76.6%	
Q3B2B	Satisfaction with HR Info System: response time	592	2.46	6.67	<u>0.00</u>						
		592	27.6%	2.46	6.67	<u>0.28</u>	ns				
		502	23.3%	2.59	6.39	<u>-0.64</u>	***				
		481	20.7%	2.13	7.03						
Q3B2C	Satisfaction with HR Info System: ease of use	601	2.43	6.35	<u>0.00</u>						
		601	28.0%	2.43	6.35	<u>0.33</u>	*				
		500	23.2%	2.55	6.02						
Q3B2D	Satisfaction with HR Info System: quality of information	599	2.27	6.78	<u>0.00</u>						
		599	27.9%	2.27	6.78	<u>0.37</u>					
		499	23.2%	2.45	6.41						
Q3B2PS	Used CMS PeopleSoft Human Resources Information System	577						83.2%	<u>0.0%</u>	16.8%	<u>0.0%</u>
		577	26.9%					83.2%	<u>25.1%</u>	16.8%	<u>-25.1%</u>
		475	22.1%					58.1%		41.9%	
Student Information											
Q3B3	Uses campus student administration information system	2118						41.6%	<u>0.0%</u>	58.4%	<u>0.0%</u>
		2118	98.7%				ns	41.6%	<u>0.4%</u>	58.4%	<u>-0.4%</u>
		2136	99.2%					41.2%		58.8%	
Q3B3C	Satisfaction with Student Admin. Info System: ease of use	865	2.59	6.65	<u>0.00</u>						
		865	40.3%	2.59	6.65	<u>-0.41</u>	**				
		865	40.2%	2.36	7.06						
Q3B3D	Satisfaction with Student Admin. Info System: quality of information	865	2.34	7.13	<u>0.00</u>						
		865	40.3%	2.34	7.13	<u>-0.48</u>	***				
		863	40.1%	2.08	7.61						
Q3B3B	Satisfaction with Student Admin. Info System: response time	861	2.49	6.91	<u>0.00</u>						
		861	40.1%	2.49	6.91	<u>-0.59</u>	***				
		865	40.2%	2.23	7.50						
Q3B3PS	Used CMS PeopleSoft Student Administration Information System	842						43.7%	<u>0.0%</u>	56.3%	<u>0.0%</u>
		842	39.2%					43.7%	<u>25.7%</u>	56.3%	<u>-25.7%</u>
		824	38.3%					18.0%		82.0%	

<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 (% pt.)</u>	<u>Change</u>	<u>No (% pt.)</u>	<u>Change</u>
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Workstation Access 4A

Hardware

Q4A1	Access to a university-provided computer workstation	2140						99.0%	<u>0.0%</u>	1.0%	<u>0.0%</u>
		2140	99.7%				***	99.0%	<u>0.3%</u>	1.0%	<u>-0.3%</u>
		2152	99.9%				**	98.7%	<u>1.5%</u>	1.3%	<u>-1.5%</u>
		2319	100.0%					97.2%		2.8%	
Q4A1C	Satisfaction with university-provided computer workstation	2115	1.69	8.47	<u>0.00</u>						
		2115	98.6%	1.69	8.47	<u>0.01</u>	ns				
		2119	98.4%	1.71	8.46	<u>0.30</u>	***				
		2252	97.1%	1.97	8.16						
QCOMP	Type of university-provided computer	2115	98.6%								
		desktop	1668	78.9%	<u>0.0%</u>						
		desktop	1668	78.9%							
		laptop	101	4.8%	<u>0.0%</u>						
		laptop	101	4.8%							
		desk- & laptop	346	16.4%	<u>0.0%</u>						
desk- & laptop	346	16.4%									

Software

Q4A2	Access to university-provided computer software	2104						97.1%	<u>0.0%</u>	2.9%	<u>0.0%</u>
		2104	98.0%				***	97.1%	<u>-0.8%</u>	2.9%	<u>0.8%</u>
		2116	98.2%				***	97.9%	<u>2.7%</u>	2.1%	<u>-2.7%</u>
		2253	97.1%					95.2%		4.8%	
Q4A2C	Satisfaction with university-provided computer software	2033	1.66	8.29	<u>0.00</u>						
		2033	94.7%	1.66	8.29	<u>0.03</u>	ns				
		2068	96.0%	1.69	8.26	<u>-0.19</u>	***				
		2138	92.2%	1.55	8.45						

Installation/Maintenance

Q4A3	Access to help to set up, upgrade... univ.-provided computer equipment	2101						95.3%	<u>0.0%</u>	4.7%	<u>0.0%</u>
		2101	97.9%				ns	95.3%	<u>-0.4%</u>	4.7%	<u>0.4%</u>
		2120	98.4%				ns	95.8%	<u>0.1%</u>	4.2%	<u>-0.1%</u>
		2247	96.9%					95.7%		4.3%	
Q4A3B	Received help to set up, upgrade,...univer.-provided computer equipment	1991						95.3%	<u>0.0%</u>	4.7%	<u>0.0%</u>
		1991	92.8%				***	95.3%	<u>0.0%</u>	4.7%	<u>-0.0%</u>
		2023	93.9%				***	95.3%	<u>4.2%</u>	4.7%	<u>-4.2%</u>
		2148	92.6%					91.0%		9.0%	
Q4A3C	Satisfaction with quality of work: set up, maintain... hardware	1897	1.77	8.25	<u>0.00</u>						
		1897	88.4%	1.77	8.25	<u>0.07</u>	ns				
		1924	89.3%	1.82	8.18	<u>0.36</u>	***				
		1952	84.1%	2.05	7.82						

<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 (% pt.)</u>	<u>Change</u>	<u>No (% pt.)</u>	<u>Change</u>
Q4B5C	Satisfaction with frequency of workstation upgrade/replacement	2078	2.22	7.58	<u>0.00</u>						
		2078	96.8%	2.22	7.58	<u>0.00</u>	ns				
		2074	96.3%	2.18	7.58						

Network Access 4B

General

Q4B1B	Satisfaction with campus E-mail services	2137	1.84	8.03	<u>0.00</u>						
		2137	99.6%	1.84	8.03	<u>-0.83</u>	***				
		2123	98.6%	1.34	8.86	<u>0.12</u>	**				
		2224	95.9%	1.48	8.74						
Q4B2B	Satisfaction with campus access to the Internet	2140	1.40	8.84	<u>0.00</u>						
		2140	99.7%	1.40	8.84	<u>0.34</u>	***				
		2127	98.7%	1.63	8.50	<u>-0.02</u>	ns				
		2249	96.9%	1.66	8.52						
Q4B3A	Used remote access campus network	2131						66.1%	<u>0.0%</u>	33.9%	<u>0.0%</u>
		2131	99.3%				***	66.1%	<u>5.9%</u>	33.9%	<u>-5.9%</u>
		2151	99.9%				***	60.2%	<u>9.9%</u>	39.8%	<u>-9.9%</u>
		2304	99.3%					50.3%		49.7%	
Q4B3B	Satisfaction with remote access to campus network	1387	2.20	7.36	<u>0.00</u>						
		1387	64.6%	2.20	7.36	<u>0.16</u>	ns				
		1285	59.7%	2.21	7.20	<u>0.55</u>	***				
		1145	49.4%	2.39	6.65						
QDSL	Has hi-speed network access from home (cable, DSL)	1393						65.3%	<u>0.0%</u>	34.7%	<u>0.0%</u>
		1393	64.9%					65.3%		34.7%	
QWIRL1	Campus provides wireless access to campus network	1468						73.3%	<u>0.0%</u>	26.7%	<u>0.0%</u>
		1468	68.4%					73.3%		26.7%	
QWIRL2	Used campus wireless network	1067						23.9%	<u>0.0%</u>	76.1%	<u>0.0%</u>
		1067	49.7%					23.9%		76.1%	
QWIRL3	Satisfaction with campus wireless network	387	2.43	7.10	<u>0.00</u>						
		387	18.0%	2.43	7.10						

Tech Support 4A

General

Q4A5	Access to help solve problems with univer.-provided computer or software	2109						97.7%	<u>0.0%</u>	2.3%	<u>0.0%</u>
		2109	98.3%				ns	97.7%	<u>0.2%</u>	2.3%	<u>-0.2%</u>
		2119	98.4%				ns	97.5%	<u>0.3%</u>	2.5%	<u>-0.3%</u>
		2243	96.7%					97.2%		2.8%	

<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 (% pt.)</u>	<u>Change</u>	<u>No (% pt.)</u>	<u>Change</u>
Q4A5E2	Received technical help to solve problem with univ.-provided computer	2056						93.9%	<u>0.0%</u>	6.1%	<u>0.0%</u>
		2056	95.8%				ns	93.9%	<u>-0.1%</u>	6.1%	<u>0.1%</u>
		2061	95.7%					94.0%		6.0%	
Q4A5E3	No. of times tech help received	1921									
		1921	89.5%				ns				
		1924	89.3%								
		1 - 2	474	24.7%	<u>0.0%</u>						
		1 - 2	474	24.7%	<u>0.4%</u>						
		3 - 5	779	40.6%	<u>0.0%</u>						
		3 - 5	779	40.6%	<u>1.3%</u>						
		6 - 10	363	18.9%	<u>0.0%</u>						
		6 - 10	363	18.9%	<u>-1.4%</u>						
		>10	305	15.9%	<u>0.0%</u>						
>10	305	15.9%	<u>-0.3%</u>								
	30500.0%										
Q4A5E4	No. of times problems with univ.-provided computer satisfactorily resolved	1931									
		1931	90.0%				ns				
		1932	89.7%								
		all times	1098	56.9%	<u>0.0%</u>						
		all times	1098	56.9%	<u>0.1%</u>						
		most times	658	34.1%	<u>0.0%</u>						
		most times	658	34.1%	<u>-0.3%</u>						
		some times	164	8.5%	<u>0.0%</u>						
		some times	164	8.5%	<u>0.2%</u>						
		none	11	0.6%	<u>0.0%</u>						
none	11	0.6%	<u>0.0%</u>								
	1100.0%										
Q4A5E5	Satisfaction with time to resolve problem with univ.-provided computer	1919	1.94	7.97	<u>0.00</u>						
		1919	89.4%	1.94	7.97	<u>0.11</u>	ns				
		1921	89.2%	2.07	7.86						
Q4A5E7	Level of reliance on tech. support to solve computer problems	2045	2.65	7.11	<u>0.00</u>						
		2045	95.3%	2.65	7.11	<u>0.04</u>	ns				
		2056	95.5%	2.70	7.07						
Departmental Service											
Q4A5E6	Tech. help provided by employee/colleague in department/unit	1899						59.2%	<u>0.0%</u>	40.8%	<u>0.0%</u>
		1899	88.5%				ns	59.2%	<u>-1.8%</u>	40.8%	<u>1.8%</u>
		1929	89.6%					61.0%		39.0%	
Training 4A											
General											
Q4A8A1A	Satisfaction with training resources/program	1657	1.77	7.63	<u>0.00</u>						
		1657	77.2%	1.77	7.63	<u>0.02</u>	ns				
		1729	80.3%	1.86	7.61	<u>0.26</u>					
		1006	43.4%	2.08	7.35						

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