CSU Technology Metrics Faculty 2002 Survey Report

Conducted for:

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INTRODUCTION

The Social and Behavioral Research Institute at California State University, San Marcos produced the CSU Faculty Technology Metrics 2002 report for the California State University Chancellor's Office. The report summarizes responses of faculty members in the California State University (CSU) system concerning access to, use of, and satisfaction with computing and network technology. This report also addresses CSU faculty's attitudes regarding computing and network resources at their campus. The report contains a description of the data, an account of the results, and a summary of the key findings.

DATA

The data came from telephone interviews with 3,150 CSU system faculty members in 2000-2001[1], and 3,290 faculty members in 2002. These faculty come from 21 campuses in the CSU system. Interviews were conducted with faculty at each of the campuses except the Maritime Academy and Channel Islands campuses, which were excluded because they do not have faculty populations adequate for sampling.

The number of interviews conducted at each campus was proportional to campus size. The number of interviews conducted at each campus may be seen in Appendix B. In addition to campus size, the sample was stratified on discipline and academic rank. This insures obtaining a sample representative of the CSU faculty with respect to these characteristics.

The interview questions addressed attitudes about, access to, use of, and satisfaction with computing and network technology. Additionally, data regarding respondent characteristics were obtained from interview questions and institution databases.

[1]Data gathered for Administration 1 was collected at the end of 2000 and beginning of 2001. For simplicity it will be referred to as the 2001 data since that data collection was completed in 2001.

Measures

A number of attitudes regarding technology were assessed using 11-point scales. For example, respondents were asked about the importance of providing distance-learning opportunities to students. They were asked to respond "using a scale of zero to ten, where zero equals not at all important and ten equals extremely important." Similarly, satisfaction items used an 11-point scale "where zero equals not at all satisfied and ten equals extremely satisfied." (See Appendix A for the full text of the questions.) On each of the 11-point scales, higher numbers indicate higher levels of the quantity being measured. Most of the items regarding access to and use of technology were yes/no type questions. Additionally, some demographic information was provided in campus databases.

RESULTS

Respondent Characteristics

Most (65.9%) of the respondents in 2002 were male, and 34.1 percent were female. This matches the gender distribution of the 2000 survey, as shown in Table 1. The respondents in 2002 averaged 50.17 years of age, compared to 50.05 years in 2000.

Table 1: Gender of Respondents.

ADMIN SURVEY ADMINISTRATION			Frequency	Percent	Valid Percent	Cumulative Percent
1 2000 AY	Valid	1 Female	1073	34.1	34.1	34.1
		2 Male	2077	65.9	65.9	100.0
		Total	3150	100.0	100.0	
2 2002 AY	Valid	1 Female	1251	38.0	38.0	38.0
		2 Male	2039	62.0	62.0	100.0
		Total	3290	100.0	100.0	

About two thirds of the respondents were tenured faculty. Table 2 displays the tenure status distribution for both 2000 and 2002. In 2002, 22.2 percent of the respondents were tenure track faculty, but not tenured, and 11.2% of the respondents were not tenure track.

Table 2: Tenure Status of Respondents.

ADMIN SURVEY ADMINISTRATION			Frequency	Percent	Valid Percent	Cumulative Percent
1 2000 AY	Valid	1 Tenure Track, Tenured	2257	71.7	71.7	71.7
		2 Tenure Track, but Not Tenured	585	18.6	18.6	90.3
		3 Not Tenure Track	305	9.7	9.7	100.0
		Total	3147	99.9	100.0	
	Missing	8 Don't Know	3	.1		
	Total		3150	100.0		
2 2002 AY	Valid	1 Tenure Track, Tenured	2187	66.5	66.6	66.6
		2 Tenure Track, but Not Tenured	728	22.1	22.2	88.8
		3 Not Tenure Track	368	11.2	11.2	100.0
		Total	3283	99.8	100.0	
	Missing	8 Don't Know	3	.1		
		9 Refused	4	.1		
		Total	7	.2		
	Total		3290	100.0		

Respondents' rank is displayed in Table 3. A majority of the respondents were full professors. Additionally, a third of the respondents were either assistant professors or associate professors, and 11.0 percent of the 2002 respondents were lecturers. The respondents had been at their school for an average of 14.51 years in 2000, and 13.68 years in 2002.

Table 3: Academic Rank.

ADMIN SURVEY ADMINISTRATION			Frequency	Percent	Valid Percent	Cumulative Percent
1 2000 AY	Valid	1 Professor	1793	56.9	57.0	57.0
		2 Associate Professor	521	16.5	16.6	73.6
		3 Assistant Professor	533	16.9	16.9	90.5
		4 Lecturer	299	9.5	9.5	100.0
		Total	3146	99.9	100.0	
	Missing	8 Don't Know	3	.1		
		9 Refused	1	.0		
		Total	4	.1		
	Total		3150	100.0		
2 2002 AY	Valid	1 Professor	1732	52.6	52.7	52.7
		2 Associate Professor	522	15.9	15.9	68.6
		3 Assistant Professor	670	20.4	20.4	89.0
		4 Lecturer	362	11.0	11.0	100.0
		Total	3286	99.9	100.0	
	Missing	8 Don't Know	3	.1		
		9 Refused	1	.0		
		Total	4	.1		
	Total		3290	100.0		

The breakdown of respondents across HEGIS codes is displayed in Table 4. The behavioral and social sciences faculty represented about a quarter of the respondents. The engineering and computer science, professional/technical, and art disciplines each constituted less than 8 percent of the sample.

Table 4: HEGIS Code.

ADMIN SURVEY ADMINISTRATION			Frequency	Percent	Valid Percent	Cumulative Percent
1 2000 AY	Valid	1 Art	239	7.6	7.6	7.6
		2 Business	349	11.1	11.1	18.7
		3 Education	438	13.9	13.9	32.6
		4 Engineering/Computer Science	200	6.3	6.3	38.9
		5 Humanities	358	11.4	11.4	50.3
		6 Science & Math	553	17.6	17.6	67.8
		7 Behavioral/Social Sciences	779	24.7	24.7	92.6
		8 Professional/Technical	234	7.4	7.4	100.0
		Total	3150	100.0	100.0	
2 2002 AY	Valid	1 Art	249	7.6	7.6	7.6
		2 Business	353	10.7	10.7	18.3
		3 Education	468	14.2	14.2	32.5
		4 Engineering/Computer Science	246	7.5	7.5	40.0
		5 Humanities	388	11.8	11.8	51.8
		6 Science & Math	499	15.2	15.2	67.0
		7 Behavioral/Social Sciences	827	25.1	25.1	92.1
		8 Professional/Technical	260	7.9	7.9	100.0
		Total	3290	100.0	100.0	

Technology Attitudes

General Attitudes Regarding Technology

All respondents were asked a series of questions regarding their impressions and beliefs about computing and network technology. Faculty believed computing and network resources are very important in completing their job tasks. Where zero indicates *not at all important* and ten indicates *extremely important*, the respondents, on average, rated the importance of computing and network resources at 8.84.

The perceived importance of computing and network resources in completing their job tasks varied by academic rank ($p<.001$). This is illustrated in Table 5a. Assistant professors viewed computing and network resources as more important in completing job tasks than did full professors ($p<.001$) and lecturers ($p<.01$). Associate professors viewed computing and network resources as more important in completing job tasks than did full professors ($p<.001$) and lecturers ($p<.001$).

Table 5a: Importance of Computing and Network Resources by Rank.

QGLOB2 Importance of Computing and Network Resources for Completion of Job Tasks

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3513	8.74	1.80	0	10
2 Associate Professor	1042	9.08	1.43	1	10
3 Assistant Professor	1199	9.00	1.45	0	10
4 Lecturer	659	8.69	1.72	0	10
Total	6413	8.84	1.68	0	10

Perceptions of importance of computing and network resources in completing job tasks also varied by discipline ($p<.001$). Table 5b shows that arts and humanities faculty rated the importance of computing and network resources lower than did faculty in other disciplines.

Table 5b: Importance of Computing and Network Resources by Discipline.

QGLOB2 Importance of Computing and Network Resources for Completion of Job Tasks

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	486	8.34	2.14	0	10
2 Business	702	9.15	1.41	0	10
3 Education	903	9.04	1.43	3	10
4 Engineering/Computer Science	446	9.27	1.20	1	10
5 Humanities	740	8.21	2.06	0	10
6 Science & Math	1051	8.88	1.65	0	10
7 Behavioral/Social Sciences	1600	8.80	1.69	0	10
8 Professional/Technical	493	9.10	1.25	3	10
Total	6421	8.84	1.68	0	10

Year of administration was also important in determining a faculty member's perception of the importance of computing and network resources in completing job tasks. This is seen in Table 5c, which shows that importance ratings went up from 2000 to 2002 ($p<.01$).

Table 5c: Importance of Computing and Network Resources by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
QGLOB2 Importance of Computing and Network Resources for Completion of Job Tasks	1 2000 AY	3141	8.77	1.69
	2 2002 AY	3280	8.91	1.66

Faculty rated their satisfaction with the computing and technology resources that were available to them. The respondents, on average, were fairly satisfied. This item used the satisfaction rating that was utilized throughout the interview. This satisfaction rating ranged from zero, indicating the respondent was *not at all satisfied*, to ten, indicating the respondent was *extremely satisfied*. Thus, the average rating of 6.94 suggests faculty were fairly satisfied with the available computing and technology resources.

The level of satisfaction with the available computing and technology resources was different for faculty in certain disciplines ($p<.001$). That is, the art faculty were less satisfied than were the other faculty. This difference is seen in Table 6a.

Table 6a: Satisfaction with Computing and Technology Resources by Discipline.

QGLOB3 Satisfaction with the Computing and Technology Resources Available

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	487	6.50	2.27	0	10
2 Business	699	7.03	1.91	0	10
3 Education	904	7.08	1.95	0	10
4 Engineering/Computer Science	444	7.05	1.76	0	10
5 Humanities	740	7.02	2.02	0	10
6 Science & Math	1044	6.84	1.83	0	10
7 Behavioral/Social Sciences	1593	6.95	1.98	0	10
8 Professional/Technical	493	6.94	1.98	0	10
Total	6404	6.94	1.96	0	10

Year of administration also affected the respondents' satisfaction with the available computing and technology resources. Table 6b shows there is an increase in satisfaction from 2000 to 2002 ($p<.001$).

Table 6b: Satisfaction with Computing and Technology Resources by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
QGLOB3 Satisfaction with the Computing and Technology Resources Available	1 2000 AY	3133	6.85	1.99
	2 2002 AY	3271	7.02	1.93

Faculty were also asked if they were aware of any efforts to improve computing and network resources on their campus in the last two years. Most (87.1%) of the respondents were aware of such efforts to improve their computing and network resources. However, respondents were slightly less likely to be aware of these efforts in 2002 than were the respondents in 2000 ($p<.001$). This is revealed in Table 7.

Table 7: Awareness of Efforts to Improve Computing and Network Resources by Year of Administration.

			ADMIN SURVEY ADMINISTRATION		
			1 2000 AY	2 2002 AY	Total
QGLOB4 Aware of Efforts to Improve Computing and Network Resources	0 No	Count	340	480	820
		% within ADMIN SURVEY ADMINISTRATION	11.0%	14.7%	12.9%
	1 Yes	Count	2757	2783	5540
		% within ADMIN SURVEY ADMINISTRATION	89.0%	85.3%	87.1%
Total		Count	3097	3263	6360
		% within ADMIN SURVEY ADMINISTRATION	100.0%	100.0%	100.0%

Those respondents who were aware of improvement efforts were asked about the consequences of these efforts. They were asked to rate on a scale of zero to ten, where zero equals *no improvement at all* and ten equals *extremely improved*, how much they thought these efforts to improve computing and network resources have improved their work conditions. On average, the respondents offered a rating of 6.11, suggesting these efforts have been perceived as somewhat helpful in improving work conditions for many respondents.

The improvement ratings varied by discipline ($p<.001$). That is, education faculty rated the improvement higher than some other disciplines, while science and math rated the improvement lower than some other disciplines. This is seen in Table 8.

Table 8: Computing and Network Resources Improvement Ratings by Discipline.

QGLOB5 How Much Efforts to Improve Computing and Networking Resources Have Improved Work Conditions

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	395	5.95	2.66	0	10
2 Business	584	6.23	2.06	0	10
3 Education	782	6.50	2.24	0	10
4 Engineering/Computer Science	388	6.28	2.17	0	10
5 Humanities	601	6.05	2.43	0	10
6 Science & Math	816	5.71	2.35	0	10
7 Behavioral/Social Sciences	1278	6.06	2.42	0	10
8 Professional/Technical	439	6.27	2.16	0	10
Total	5283	6.11	2.34	0	10

Faculty members offered ratings of their computer knowledge for teaching and research activities. They were asked to respond on a scale of zero to ten, where zero means *not at all knowledgeable* and ten means *extremely knowledgeable*. On this zero-to-ten scale, the faculty, on average, said their knowledge of computer hardware and software important to their teaching and research activities was 7.22.

There was a difference between the self ratings offered by full professors and lecturers in comparison to assistant and associate professors. As Table 9a shows, assistant professors rated their knowledge of computer hardware and software important to their teaching and research activities higher than full professors ($p<.001$) and lecturers ($p<.001$). Associate professors also rated their knowledge of computer hardware and software higher than full professors ($p<.001$) and lecturers ($p<.05$).

Table 9a: Knowledge of Computers Importantant to Teaching and Research by Rank.

Q4A9 Knowledge of Computer Hardware and Software Important to Teaching and Research

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3509	7.08	1.94	0	10
2 Associate Professor	1040	7.39	1.77	2	10
3 Assistant Professor	1202	7.50	1.60	0	10
4 Lecturer	661	7.13	1.91	0	10
Total	6412	7.22	1.86	0	10

There were also significant differences in ratings of knowledge of computer hardware and software among faculty from different disciplines ($p<.001$). This is revealed in Table 9b. Most notably, faculty in engineering and computer science, rated themselves higher than did faculty in all other disciplines with respect to knowledge of computer hardware and software important to their teaching and research activities. Additionally, those in business rated themselves higher than those in most other

disciplines, and humanities faculty rated their computer knowledge lower than did faculty in all other disciplines.

Table 9b: Knowledge of Computers Importantant to Teaching and Research by Discipline.

Q4A9 Knowledge of Computer Hardware and Software Important to Teaching and Research

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	486	6.97	2.07	0	10
2 Business	700	7.69	1.65	0	10
3 Education	901	7.14	1.80	0	10
4 Engineering/Computer Science	444	8.22	1.37	2	10
5 Humanities	745	6.56	1.95	0	10
6 Science & Math	1049	7.45	1.76	0	10
7 Behavioral/Social Sciences	1602	7.04	1.92	0	10
8 Professional/Technical	492	7.07	1.71	1	10
Total	6419	7.22	1.86	0	10

Technology Policy Attitudes

Faculty were asked about their opinion with respect to a number of technology policy issues. Overall ratings of these issues are displayed in Table 10. Faculty were asked how important they thought a number of campus technology policies were using a zero-to-ten scale, with higher numbers indicating greater importance.

Table 10: Importance of Campus Technology Policies.

	N	Minimum	Maximum	Mean	Std. Deviation
Q1A8 How Well Department Prepares Students for Necessary Technology Skills	6116	0	10	6.57	2.18
Q1A9 Importance of Having Formal Plan for Integrating Technology into the Curriculum	6331	0	10	7.46	2.62
Q1A10 Importance of Requiring Information Competency of All Undergraduates	6322	0	10	8.19	2.18
Q1A11 Importance of Requiring Students to Have Unlimited Computer Access, Both On and Off Campus	6296	0	10	8.28	2.25
Q1A12 Importance of Requiring Students to Have Unlimited Campus Network Access, Both On and Off Campus	6304	0	10	8.37	2.16
Q1A14 Importance of Providing Incentives for Faculty to Participate In the Development of Technology-Mediated Resources	6364	0	10	8.02	2.38
Q1A15 Importance of a Formal Policy Regarding Ownership of Web-Based and Other Technology-Mediated Resources Developed by Faculty	6139	0	10	8.16	2.35
QI4B5B Importance of Assisting Faculty to Integrate Technology into Instruction	6362	0	10	8.21	2.03
Valid N (listwise)	5655				

Faculty gave their opinion regarding the adequacy of the preparation students receive in their department for the technology skills they will need after graduation. As Table 10 indicates, the overall rating was 6.57, leaving substantial room for improvement. Table 11a shows that assistant professors rated the preparation students receive in their department lower than did associate ($p<.05$) and full professors ($p<.001$).

Table 11a: How Well the Respondents Department Prepares Students for Needed Technology Skills by Rank.

Q1A8 How Well Department Prepares Students for Necessary Technology Skills

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3370	6.68	2.15	0	10
2 Associate Professor	995	6.56	2.12	0	10
3 Assistant Professor	1136	6.30	2.20	0	10
4 Lecturer	611	6.45	2.30	0	10
Total	6112	6.57	2.18	0	10

Ratings of the technology skills preparation students receive from their department varied by discipline. Table 11b shows, most notably, that engineering and computer science faculty rate the preparation their students receive higher than do faculty in all other departments, and those in humanities rate the preparation of their students lower than all other departments.

Table 11b: How Well the Respondents Department Prepares Students for Needed Technology Skills by Discipline.

Q1A8 How Well Department Prepares Students for Necessary Technology Skills

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	449	6.51	2.37	0	10
2 Business	674	6.95	1.94	0	10
3 Education	853	6.74	1.98	0	10
4 Engineering/Computer Science	444	7.80	1.62	0	10
5 Humanities	667	5.38	2.43	0	10
6 Science & Math	1006	6.84	1.93	0	10
7 Behavioral/Social Sciences	1544	6.38	2.22	0	10
8 Professional/Technical	479	6.37	2.16	0	10
Total	6116	6.57	2.18	0	10

The importance to faculty of having a formal plan for integrating technology into the curriculum was assessed. Overall, faculty rated the importance at 7.46. The rating varied by rank. Table 12a shows that lecturers rated having a formal plan for integrating technology into the curriculum higher than did assistant ($p<.01$), associate ($p<.05$), and full professors ($p<.001$).

Table 12a: Importance of a Formal Plan for Integrating Technology into the Curriculum by Rank.

Q1A9 Importance of Having Formal Plan for Integrating Technology into the Curriculum

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3454	7.36	2.71	0	10
2 Associate Professor	1032	7.52	2.60	0	10
3 Assistant Professor	1195	7.44	2.53	0	10
4 Lecturer	646	7.89	2.25	0	10
Total	6327	7.45	2.62	0	10

Table 12b shows differences in the ratings of the importance of having a formal plan for integrating technology into the curriculum. Education, engineering and computer science, and professional/technical faculty rated the importance of having a formal plan for integrating technology as more important than did other faculty.

Table 12b: Importance of a Formal Plan for Integrating Technology into the Curriculum by Discipline.

Q1A9 Importance of Having Formal Plan for Integrating Technology into the Curriculum

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	473	7.66	2.50	0	10
2 Business	694	7.89	2.38	0	10
3 Education	886	8.45	2.05	0	10
4 Engineering/Computer Science	438	8.42	2.04	0	10
5 Humanities	731	6.07	3.05	0	10
6 Science & Math	1040	7.14	2.61	0	10
7 Behavioral/Social Sciences	1585	7.04	2.70	0	10
8 Professional/Technical	484	8.06	2.13	0	10
Total	6331	7.46	2.62	0	10

Faculty were asked how important it was for their campus to require students to have information competency, that is, the ability to access, analyze, and present information using computing and network technologies. Their responses varied by rank, as indicated in Table 13a. Full professors

and assistant professors rated requiring information competence as less important than did associate professors and lecturers.

Table 13a: Importance of Requiring Information Competence by Rank.

Q1A10 Importance of Requiring Information Competency of All Undergraduates

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3454	8.11	2.32	0	10
2 Associate Professor	1028	8.38	1.99	0	10
3 Assistant Professor	1186	8.12	2.10	0	10
4 Lecturer	650	8.42	1.83	0	10
Total	6318	8.19	2.18	0	10

The perceived importance of an information competency requirement varied by academic discipline. This is seen in Table 13b. The business faculty viewed requiring information competency as more important than did faculty from most other disciplines.

Table 13b: Importance of Requiring Information Competence by Discipline.

Q1A10 Importance of Requiring Information Competency of All Undergraduates

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	476	8.11	2.29	0	10
2 Business	697	8.82	1.70	0	10
3 Education	876	8.75	1.77	0	10
4 Engineering/Computer Science	443	8.19	2.12	0	10
5 Humanities	737	7.80	2.46	0	10
6 Science & Math	1038	7.66	2.39	0	10
7 Behavioral/Social Sciences	1575	8.05	2.19	0	10
8 Professional/Technical	480	8.54	1.99	0	10
Total	6322	8.19	2.18	0	10

There was also a slight decrease in the importance ratings of requiring information competence of the students from Administration 1 (8.26) to Administration 2 (8.12) ($p<.001$). This is seen in Table 13c.

Table 13c: Importance of Requiring Information Competence by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1A10 Importance of Requiring Information Competency of All Undergraduates	1 2000 AY	3088	8.26	2.19
	2 2002 AY	3234	8.12	2.18

Faculty were also asked about the importance of requiring students to have unlimited access to computers, both on and off campus. Table 10 shows that this was perceived as rather important as well. The average importance rating was 8.28.

Academic rank was related to a faculty member's rating of the importance of requiring students to have unlimited access to computers. Table 14a shows that full professors rated this as less important than did assistant professors ($p<.05$) and lecturers ($p<.01$).

Table 14a: Importance of Requiring Students to Have Unlimited Computer Access by Rank.

Q1A11 Importance of Requiring Students to Have Unlimited Computer Access, Both On and Off Campus

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3432	8.19	2.35	0	10
2 Associate Professor	1022	8.33	2.16	0	10
3 Assistant Professor	1185	8.39	2.13	0	10
4 Lecturer	653	8.51	2.05	0	10
Total	6292	8.28	2.25	0	10

Faculty in different disciplines differed in their ratings of the importance of requiring students to have unlimited access to computers, both on and off campus. Table 14b shows that science and math faculty viewed requiring students to have unlimited computer access as less important than did faculty from all the other disciplines.

Table 14b: Importance of Requiring Students to Have Unlimited Computer Access by Discipline.

Q1A11 Importance of Requiring Students to Have Unlimited Computer Access, Both On and Off Campus

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	472	8.42	2.18	0	10
2 Business	692	8.31	2.17	0	10
3 Education	876	8.73	2.02	0	10
4 Engineering/Computer Science	440	8.43	1.94	0	10
5 Humanities	733	8.26	2.41	0	10
6 Science & Math	1031	7.71	2.41	0	10
7 Behavioral/Social Sciences	1571	8.24	2.30	0	10
8 Professional/Technical	481	8.55	2.07	0	10
Total	6296	8.28	2.25	0	10

In addition to computer access, campus network access was rated as important. That is, faculty regarded it as important that students are required to have unlimited access to the campus network, both on and off campus. Table 10 shows the average importance rating was 8.37.

The perceived importance of requiring unlimited access to the campus network varied by discipline. The importance ratings by discipline are found in Table 15. As with computers, science and math faculty view requiring students to have unlimited campus network access as less important than do faculty from all the other disciplines.

Table 15: Importance of Requiring Unlimited Campus Network Access for Students by Discipline.

Q1A12 Importance of Requiring Students to Have Unlimited Campus Network Access, Both On and Off Campus

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	479	8.60	2.06	0	10
2 Business	695	8.44	1.98	0	10
3 Education	882	8.72	2.01	0	10
4 Engineering/Computer Science	440	8.38	2.00	0	10
5 Humanities	726	8.38	2.31	0	10
6 Science & Math	1032	7.87	2.33	0	10
7 Behavioral/Social Sciences	1570	8.31	2.26	0	10
8 Professional/Technical	480	8.68	1.76	0	10
Total	6304	8.37	2.16	0	10

The issue of incentives for faculty to participate in the development of technology-mediated resources was addressed. Respondents were asked how important they thought it was to provide incentives, for example, release time or extra compensation, for faculty to participate in the development of technology-mediated resources for teaching or learning. The average importance rating was 8.02, suggesting faculty regard this as quite important.

The degree to which faculty thought the provision of incentives for faculty to participate in the development of technology-mediated resources to be important depended on rank. This is seen in Table 16a. Full professors, on average, regarded this as less important than other faculty ($p<.001$).

Table 16a: Importance of Incentives for Faculty to Develop Technology-Mediated Resources by Rank.

Q1A14 Importance of Providing Incentives for Faculty to Participate In the Development of Technology-Mediated Resources

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3474	7.80	2.56	0	10
2 Associate Professor	1034	8.24	2.23	0	10
3 Assistant Professor	1199	8.35	2.06	0	10
4 Lecturer	653	8.24	2.05	0	10
Total	6360	8.02	2.38	0	10

The degree to which faculty said incentives for participation in the development of technology-mediated resources were important also depended on discipline. As Table 16b shows, science and math faculty, on average, tended to believe incentives for participation in the development of technology-mediated resources was less important than most other faculty.

Table 16b: Importance of Incentives for Faculty to Develop Technology-Mediated Resources by Discipline.

Q1A14 Importance of Providing Incentives for Faculty to Participate In the Development of Technology-Mediated Resources

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	481	8.27	2.21	0	10
2 Business	693	8.03	2.30	0	10
3 Education	894	8.55	2.18	0	10
4 Engineering/Computer Science	445	8.09	2.23	0	10
5 Humanities	738	7.91	2.53	0	10
6 Science & Math	1042	7.42	2.53	0	10
7 Behavioral/Social Sciences	1584	7.91	2.42	0	10
8 Professional/Technical	487	8.52	2.14	0	10
Total	6364	8.02	2.38	0	10

Faculty said it was very important for their campus to have a formal policy regarding ownership of web-based and other technology-mediated teaching and learning resources developed by faculty. As shown in Table 10, the average importance rating on the zero-to-ten scale was 8.16.

Importance ratings of a formal policy regarding ownership of technology-mediated teaching and learning resources developed by faculty varied by rank. As Table 17a shows, associate professors believed this to be more important than did other faculty.

Table 17a: Importance of a Policy on Ownership of Technology-Mediated Resources by Rank.

Q1A15 Importance of a Formal Policy Regarding Ownership of Web-Based and Other Technology-Mediated Resources Developed by Faculty

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3350	8.14	2.45	0	10
2 Associate Professor	1001	8.38	2.18	0	10
3 Assistant Professor	1158	8.06	2.25	0	10
4 Lecturer	626	8.06	2.28	0	10
Total	6135	8.16	2.35	0	10

The extent to which faculty regarded a formal policy regarding ownership of technology-mediated teaching and learning resources developed by faculty as important varied by discipline. Table 17b shows that science and math faculty regarded this as less important than faculty in most other disciplines.

Table 17b: Importance of a Policy on Ownership of Technology-Mediated Resources by Discipline.

Q1A15 Importance of a Formal Policy Regarding Ownership of Web-Based and Other Technology-Mediated Resources Developed by Faculty

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	461	8.15	2.60	0	10
2 Business	685	8.08	2.29	0	10
3 Education	866	8.56	2.11	0	10
4 Engineering/Computer Science	432	7.86	2.36	0	10
5 Humanities	713	8.24	2.43	0	10
6 Science & Math	994	7.65	2.52	0	10
7 Behavioral/Social Sciences	1519	8.23	2.31	0	10
8 Professional/Technical	469	8.53	2.06	0	10
Total	6139	8.16	2.35	0	10

Respondents considered it important for their campus to assist faculty in integrating technology into instruction. Table 10 shows that, on average, the importance of such assistance was rated 8.21 on the zero-to-ten importance scale.

The importance of campus assistance in integration of technology into instruction varied by rank. Lecturers thought it more important than did full professors ($p<.01$) for the campus to provide assistance in integrating technology into instruction. This is seen in Table 18a.

Table 18a: Importance of Assisting Faculty to Integrate Technology into Instruction by Rank.

QI4B5B Importance of Assisting Faculty to Integrate Technology into Instruction

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3471	8.15	2.12	0	10
2 Associate Professor	1035	8.30	1.87	0	10
3 Assistant Professor	1196	8.20	1.97	0	10
4 Lecturer	656	8.43	1.80	0	10
Total	6358	8.21	2.03	0	10

Academic discipline also qualified the ratings of the importance of campus assistance in the integration of technology into instruction. That is, the business, education and professional/technical faculty regarded such assistance to be more important than did faculty in most other disciplines. This is shown in Table 18b.

Table 18b: Importance of Assisting Faculty to Integrate Technology into Instruction by Discipline.

QI4B5B Importance of Assisting Faculty to Integrate Technology into Instruction

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	479	8.22	2.16	0	10
2 Business	696	8.56	1.75	0	10
3 Education	894	8.81	1.63	0	10
4 Engineering/Computer Science	444	8.09	1.95	0	10
5 Humanities	736	7.89	2.26	0	10
6 Science & Math	1042	7.67	2.19	0	10
7 Behavioral/Social Sciences	1588	8.09	2.06	0	10
8 Professional/Technical	483	8.78	1.63	0	10
Total	6362	8.21	2.03	0	10

Workstations, Software, and Help

Computer Use

Faculty were asked about the frequency of their computer use. Specifically, they were asked how often they use a computer for any purpose. This question was asked only at Administration 2. The responses are summarized in Table 19. Virtually everyone responded that they use a computer almost every day. There was no variation by subgroups.

Table 19: How Often Respondent Uses a Computer for Any Purpose.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Almost Every Day	3261	50.6	99.1	99.1
	2 Weekly	19	.3	.6	99.7
	3 Monthly	5	.1	.2	99.8
	4 At Least Once a Semester or Quarter	1	.0	.0	99.8
	5 Almost Never	2	.0	.1	99.9
	6 Never	3	.0	.1	100.0
	Total	3291	51.1	100.0	
Missing	9 Refuse	1	.0		
	System	3150	48.9		
	Total	3151	48.9		
Total		6442	100.0		

Hardware

Respondents were asked about access to the computer workstations, software, and maintenance. They were asked if they had access to a university-provided computer workstation to complete their work. Their responses are summarized in Table 20. Almost all (96.9%) of the respondents said they had access to a university-provided computer workstation.

Table 20: Access to a University-Provided Hardware and Software.

	0 No		1 Yes	
	Count	%	Count	%
Respondent Has Access to a University-Provided Computer Workstation to Complete Work	202	3.1%	6212	96.9%
Respondent Has Access to a University-Provided Computer Software Needed to Complete Work	331	5.4%	5806	94.6%
Respondent Has Access to Help on Campus to Set up, Upgrade, Maintain, or Repair University-Provided Computer Equipment	154	2.5%	6020	97.5%

Access to a university-provided computer workstation to complete their work varied by slightly by administration. Table 21 shows that the percentage of faculty reporting that they had access to a computer workstation rose from 96.2 percent in 2000 to 97.5 percent in 2002 ($p<.01$).

Table 21: Access to a University-Provided Computer Workstation by Administration.

			QI4A1 Respondent Has Access to a University-Provided Computer Workstation to Complete Work		
			0 No	1 Yes	Total
ADMIN SURVEY ADMINISTRATION	1 2000 AY	Count	120	3015	3135
		% within ADMIN SURVEY ADMINISTRATION	3.8%	96.2%	100.0%
	2 2002 AY	Count	82	3197	3279
		% within ADMIN SURVEY ADMINISTRATION	2.5%	97.5%	100.0%
Total		Count	202	6212	6414
		% within ADMIN SURVEY ADMINISTRATION	3.1%	96.9%	100.0%

Those faculty reporting that they had access to a university-provided computer workstation were asked how satisfied they were with the workstation provided to them. Overall, faculty were fairly satisfied; the average satisfaction rating was 7.79.

The level of satisfaction with computer workstations was different for faculty at different ranks. This is seen in Table 22a. Lecturers were less satisfied with the workstations provided for them than were full ($p<.001$), associate ($p<.01$), and assistant professors ($p<.001$).

Table 22a: Satisfaction with the Available University-Provided Workstation by Rank.

QI4A1C Satisfaction with the University-Provided Computer Workstation Available to Respondent

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3371	7.82	2.11	0	10
2 Associate Professor	1009	7.75	2.07	0	10
3 Assistant Professor	1164	7.96	1.93	0	10
4 Lecturer	625	7.35	2.56	0	10
Total	6169	7.79	2.13	0	10

The level of satisfaction with computer workstations also varied by discipline. Table 22b shows that education faculty were more satisfied than were faculty in art ($p<.001$), humanities ($p<.05$), and the behavioral and social sciences ($p<.001$). Further, business faculty were more satisfied than were faculty in art ($p<.001$) and the behavioral and social sciences ($p<.001$).

Table 22b: Satisfaction with the Available University-Provided Workstation by Discipline.

QI4A1C Satisfaction with the University-Provided Computer Workstation Available to Respondent

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	463	7.49	2.41	0	10
2 Business	679	8.08	1.92	0	10
3 Education	878	8.10	1.94	0	10
4 Engineering/Computer Science	424	7.81	2.00	0	10
5 Humanities	720	7.73	2.27	0	10
6 Science & Math	978	7.79	2.03	0	10
7 Behavioral/Social Sciences	1555	7.61	2.23	0	10
8 Professional/Technical	480	7.80	2.05	0	10
Total	6177	7.79	2.13	0	10

Software

The availability of software was also a concern. Faculty were asked if they had access to university-provided software they needed to complete their work. The results are in Table 20. As with workstations, almost all (94.6%) of the respondents said they had what they needed with respect to software.

The availability of computer software necessary to complete work varied by discipline ($p<.001$). This can be seen in Table 23a. Faculty in art were significantly less likely to state that they have access to university-provided computer software than were faculty in other disciplines.

Table 23a: Access to a University-Provided Software Needed to Complete Work by Discipline.

			QI4A2 Respondent Has Access to a University-Provided Computer Software Needed to Complete Work		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	53	401	454
		% within DEPCODE3 Department Code	11.7%	88.3%	100.0%
	2 Business	Count	21	656	677
		% within DEPCODE3 Department Code	3.1%	96.9%	100.0%
	3 Education	Count	42	831	873
		% within DEPCODE3 Department Code	4.8%	95.2%	100.0%
	4 Engineering/Computer Science	Count	24	396	420
		% within DEPCODE3 Department Code	5.7%	94.3%	100.0%
	5 Humanities	Count	29	676	705
		% within DEPCODE3 Department Code	4.1%	95.9%	100.0%
	6 Science & Math	Count	57	920	977
		% within DEPCODE3 Department Code	5.8%	94.2%	100.0%
	7 Behavioral/Social Sciences	Count	81	1471	1552
		% within DEPCODE3 Department Code	5.2%	94.8%	100.0%
	8 Professional/Technical	Count	24	455	479
		% within DEPCODE3 Department Code	5.0%	95.0%	100.0%
Total		Count	331	5806	6137
		% within DEPCODE3 Department Code	5.4%	94.6%	100.0%

Table 23b shows the percentage of faculty stating that they had the university-provided software they needed to complete their work by administration. The percentage decreased from 95.6 percent in 2000 to 93.6 percent in 2002 ($p<.01$).

Table 23b: Access to a University-Provided Software Needed to Complete Work by Administration.

			QI4A2 Respondent Has Access to a University-Provided Computer Software Needed to Complete Work		
			0 No	1 Yes	Total
ADMIN SURVEY ADMINISTRATION	1 2000 AY	Count	130	2845	2975
		% within ADMIN SURVEY ADMINISTRATION	4.4%	95.6%	100.0%
	2 2002 AY	Count	201	2961	3162
		% within ADMIN SURVEY ADMINISTRATION	6.4%	93.6%	100.0%
Total		Count	331	5806	6137
		% within ADMIN SURVEY ADMINISTRATION	5.4%	94.6%	100.0%

Those stating that they had access to university-provided computer software necessary for their work were asked how satisfied they were with that software. Faculty who had access to software were generally satisfied with that software, as indicated by an average satisfaction rating of 7.83.

The rank of the faculty member was associated with the level of satisfaction they expressed. Assistant professors and lecturers were more satisfied than were full and associate professors. This is seen in Table 24a.

Table 24a: Satisfaction with University-Provided Software by Rank.

QI4A2C Satisfaction with the University-Provided Software Available to Respondent

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3151	7.77	1.95	0	10
2 Associate Professor	949	7.74	1.87	0	10
3 Assistant Professor	1081	7.97	1.69	0	10
4 Lecturer	576	8.02	1.95	0	10
Total	5757	7.83	1.89	0	10

The level of faculty's satisfaction with the university-provided software depended on discipline. That is, business and education faculty were generally more satisfied with the software provided to them by the university than faculty in some of the other disciplines. This is seen in Table 24b.

Table 24b: Satisfaction with University-Provided Software by Discipline.

QI4A2C Satisfaction with the University-Provided Software Available to Respondent

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	395	7.75	1.97	1	10
2 Business	655	8.12	1.73	0	10
3 Education	826	8.10	1.77	1	10
4 Engineering/Computer Science	395	7.59	1.91	0	10
5 Humanities	669	7.74	2.10	0	10
6 Science & Math	908	7.54	1.84	0	10
7 Behavioral/Social Sciences	1463	7.77	1.93	0	10
8 Professional/Technical	454	8.10	1.73	1	10
Total	5765	7.83	1.89	0	10

Help

Respondents were asked about assistance with installation and maintenance of computers. As indicated in Table 20, almost all (97.5%) of the faculty stated that they had access to assistance on campus to set up, upgrade, maintain, or repair a university-provided computer or computer equipment.

There was a difference by discipline in reported availability of help on campus to set up, upgrade, maintain, or repair a university-provided computer or computer equipment ($p<.001$). Table 25 shows that faculty in engineering and computer science had the lowest percentage (94.6%) of people reporting having access to assistance with the installation and maintenance of computer equipment. That is, those who were probably least likely to need assistance were least likely to report having assistance available.

Table 25: Access to Help on Campus to Set up, Upgrade, Maintain, or Repair University-Provided Computer Equipment by Discipline.

			QI4A3 Respondent Has Access to Help on Campus to Set up, Upgrade, Maintain, or Repair University-Provided Computer Equipment		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	16	443	459
		% within DEPCODE3 Department Code	3.5%	96.5%	100.0%
	2 Business	Count	15	660	675
		% within DEPCODE3 Department Code	2.2%	97.8%	100.0%
	3 Education	Count	11	865	876
		% within DEPCODE3 Department Code	1.3%	98.7%	100.0%
	4 Engineering/Computer Science	Count	23	401	424
		% within DEPCODE3 Department Code	5.4%	94.6%	100.0%
	5 Humanities	Count	19	700	719
		% within DEPCODE3 Department Code	2.6%	97.4%	100.0%
	6 Science & Math	Count	32	951	983
		% within DEPCODE3 Department Code	3.3%	96.7%	100.0%
	7 Behavioral/Social Sciences	Count	31	1526	1557
		% within DEPCODE3 Department Code	2.0%	98.0%	100.0%
	8 Professional/Technical	Count	7	474	481
		% within DEPCODE3 Department Code	1.5%	98.5%	100.0%
Total		Count	154	6020	6174
		% within DEPCODE3 Department Code	2.5%	97.5%	100.0%

Those reporting that assistance was available on campus to set up, upgrade, maintain, or repair a university-provided computer or computer equipment were asked if they had made use of this assistance. Most (96.2%) of the respondents had.

The likelihood of having received campus assistance with university-provided computer equipment was not consistent across academic rank. As Table 26a shows, lecturers were less likely than others to use the campus assistance with computer equipment that was available to them.

Table 26a: Received Assistance from the Campus with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment by Rank.

			QI4A3B Respondent Received Assistance From the Campus with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment		
			0 No	1 Yes	Total
QJOB6 Academic Rank	1 Professor	Count	89	3192	3281
		% within QJOB6 Academic Rank	2.7%	97.3%	100.0%
	2 Associate Professor	Count	40	948	988
		% within QJOB6 Academic Rank	4.0%	96.0%	100.0%
	3 Assistant Professor	Count	54	1077	1131
		% within QJOB6 Academic Rank	4.8%	95.2%	100.0%
	4 Lecturer	Count	45	557	602
		% within QJOB6 Academic Rank	7.5%	92.5%	100.0%
Total		Count	228	5774	6002
		% within QJOB6 Academic Rank	3.8%	96.2%	100.0%

Use of campus help with university-provided computer equipment also varied by discipline. Faculty in the humanities, business, and professional/technical disciplines were more likely to make use of the available campus help than were faculty in other disciplines. This is seen in Table 26b. Faculty in science and math, as well as engineering and computer science were less likely to use the help available from campus.

Table 26b: Received Assistance from the Campus with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment by Discipline.

			QI4A3B Respondent Received Assistance From the Campus with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	15	428	443
		% within DEPCODE3 Department Code	3.4%	96.6%	100.0%
	2 Business	Count	14	644	658
		% within DEPCODE3 Department Code	2.1%	97.9%	100.0%
	3 Education	Count	34	831	865
		% within DEPCODE3 Department Code	3.9%	96.1%	100.0%
	4 Engineering/Computer Science	Count	22	378	400
		% within DEPCODE3 Department Code	5.5%	94.5%	100.0%
	5 Humanities	Count	14	684	698
		% within DEPCODE3 Department Code	2.0%	98.0%	100.0%
	6 Science & Math	Count	58	890	948
		% within DEPCODE3 Department Code	6.1%	93.9%	100.0%
	7 Behavioral/Social Sciences	Count	62	1462	1524
		% within DEPCODE3 Department Code	4.1%	95.9%	100.0%
	8 Professional/Technical	Count	9	465	474
		% within DEPCODE3 Department Code	1.9%	98.1%	100.0%
Total		Count	228	5782	6010
		% within DEPCODE3 Department Code	3.8%	96.2%	100.0%

Those that had received campus assistance with university-provided computer equipment were asked how satisfied they were with the service they received. Overall, faculty were fairly satisfied and offered an average satisfaction rating of 7.28.

The level of satisfaction with campus assistance with installing and maintaining university-provided computer equipment varied by rank. As shown in Table 27a, lecturers were more satisfied than were associate professors ($p<.01$).

Table 27a: Satisfaction with Campus Help with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment by Rank.

QI4A3C Satisfaction with Assistance from the Campus with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3185	7.28	2.30	0	10
2 Associate Professor	945	7.13	2.43	0	10
3 Assistant Professor	1074	7.31	2.30	0	10
4 Lecturer	557	7.52	2.29	0	10
Total	5761	7.28	2.32	0	10

Satisfaction also varied with discipline. This is seen in Table 27b. Education and business faculty were more satisfied with campus installation and maintenance help than faculty in most other disciplines.

Table 27b: Satisfaction with Campus Help with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment by Discipline.

QI4A3C Satisfaction with Assistance from the Campus with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	427	7.10	2.48	0	10
2 Business	643	7.66	2.02	0	10
3 Education	829	7.65	2.30	0	10
4 Engineering/Computer Science	378	7.09	2.25	0	10
5 Humanities	683	7.14	2.42	0	10
6 Science & Math	887	7.07	2.16	0	10
7 Behavioral/Social Sciences	1457	7.28	2.37	0	10
8 Professional/Technical	465	7.12	2.53	0	10
Total	5769	7.29	2.32	0	10

The level of satisfaction faculty expressed with campus installation and maintenance help increased from Administration 1 (7.10) to Administration 2 (7.46) ($p<.001$). This is illustrated in Table 27c.

Table 27c: Satisfaction with Campus Help with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
QI4A3C Satisfaction with Assistance from the Campus with Installation, Upgrading, or Maintenance of University-Provided Computer Equipment	1 2000 AY	2797	7.10	2.40
	2 2002 AY	2972	7.46	2.23

Satisfaction with the frequency of upgrades or replacement of computer workstations was assessed in 2002. On a zero-to-ten scale, faculty rated their satisfaction at 6.57. This rating differed by discipline, as shown in Table 28. Art faculty were less satisfied than were faculty in business ($p<.001$), engineering and computer science ($p<.05$), and education ($p<.01$).

Table 28: Satisfaction with Frequency of Upgrades or Replacement by Discipline.

QI4B5C Satisfaction with How Often Computer Workstation is Upgraded or Replaced

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	226	5.99	2.88	0	10
2 Business	339	7.17	2.42	0	10
3 Education	441	6.69	2.61	0	10
4 Engineering/Computer Science	225	6.89	2.40	0	10
5 Humanities	357	6.54	2.81	0	10
6 Science & Math	441	6.22	2.69	0	10
7 Behavioral/Social Sciences	775	6.49	2.77	0	10
8 Professional/Technical	244	6.75	2.65	0	10
Total	3048	6.57	2.69	0	10

Connectivity

Internet

Faculty's use and satisfaction with connectivity was assessed. Faculty members were asked if they had used campus e-mail services or access to the Internet including the world wide web. The responses are summarized in Table 29. Almost all (98.9%) faculty reported using campus e-mail services or access to the Internet.

Table 29: Use of On-Line Information Services.

	0 No		1 Yes	
	Count	%	Count	%
Respondent Uses Campus E-mail or Access to the Internet Including the World Wide Web	36	1.1%	3251	98.9%
Respondent Uses Campus Network from Off-Campus, Using a Modem, Cable, DSL, ISDN, or ISP	677	20.6%	2604	79.4%

Those faculty who had used their campus access to the Internet were asked about how satisfied they were with this access. An average satisfaction rating of 8.23 indicates that faculty were quite satisfied. Satisfaction ratings did not differ by rank or discipline. This question was not asked in 2000.

Campus Network Access

Faculty were asked if they had used their campus network from off-campus, using a modem, cable, DSL, ISDN, or an Internet service provider. More than three-quarters (79.4%) faculty reported that they had accessed their campus network from off-campus, as shown in Table 29.

The likelihood of using their campus network from off-campus, using a modem, cable, DSL, ISDN, or Internet service provider depended on academic rank ($p<.05$). As shown in Table 30a, lecturers were less likely than other faculty to access their campus network from off-campus.

Table 30a: Use of Campus Network from Off-Campus by Rank.

			QI4B3A Respondent Uses Campus Network from Off-Campus, Using a Modem, Cable, DSL, ISDN, or ISP		
			0 No	1 Yes	Total
QJOB6 Academic Rank	1 Professor	Count	334	1391	1725
		% within QJOB6 Academic Rank	19.4%	80.6%	100.0%
	2 Associate Professor	Count	102	420	522
		% within QJOB6 Academic Rank	19.5%	80.5%	100.0%
	3 Assistant Professor	Count	144	524	668
		% within QJOB6 Academic Rank	21.6%	78.4%	100.0%
	4 Lecturer	Count	96	266	362
		% within QJOB6 Academic Rank	26.5%	73.5%	100.0%
Total		Count	676	2601	3277
		% within QJOB6 Academic Rank	20.6%	79.4%	100.0%

Use of their campus network by connecting from off campus also varied by discipline ($p<.05$). Table 30b shows that business and engineering and computer science faculty were more likely than others to access their campus network from off campus. On the other hand, art faculty were less likely than others to access their campus network from off campus.

Table 30b: Use of Campus Network from Off-Campus by Discipline.

			QI4B3A Respondent Uses Campus Network from Off-Campus, Using a Modem, Cable, DSL, or ISDN		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	66	182	248
		% within DEPCODE3 Department Code	26.6%	73.4%	100.0%
	2 Business	Count	54	298	352
		% within DEPCODE3 Department Code	15.3%	84.7%	100.0%
	3 Education	Count	103	362	465
		% within DEPCODE3 Department Code	22.2%	77.8%	100.0%
	4 Engineering/Computer Science	Count	39	207	246
		% within DEPCODE3 Department Code	15.9%	84.1%	100.0%
	5 Humanities	Count	80	306	386
		% within DEPCODE3 Department Code	20.7%	79.3%	100.0%
	6 Science & Math	Count	109	391	500
		% within DEPCODE3 Department Code	21.8%	78.2%	100.0%
	7 Behavioral/Social Sciences	Count	176	649	825
		% within DEPCODE3 Department Code	21.3%	78.7%	100.0%
	8 Professional/Technical	Count	50	209	259
		% within DEPCODE3 Department Code	19.3%	80.7%	100.0%
Total		Count	677	2604	3281
		% within DEPCODE3 Department Code	20.6%	79.4%	100.0%

Those that did access their campus network from off-campus, using a modem, cable, DSL, ISDN, or Internet service provider were asked how satisfied they were with that access. Respondents were somewhat satisfied, offering an average rating of 6.90.

The average satisfaction rating differed by academic rank. This is illustrated in Table 31. Lecturers expressed greater satisfaction than did other faculty with their access to the campus network from off campus.

Table 31: Satisfaction with Access to Campus Network from off Campus by Rank.

QI4B3B Satisfaction with Campus Network from Off-Campus, Using a Modem, Cable, DSL, or ISDN

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	1379	6.85	2.45	0	10
2 Associate Professor	415	6.84	2.46	0	10
3 Assistant Professor	523	6.82	2.55	0	10
4 Lecturer	265	7.42	2.26	0	10
Total	2582	6.90	2.46	0	10

Equipment

Faculty were asked about their satisfaction with the working order and capabilities of various forms of equipment on campus. They were asked about computing, telephone, and video conferencing equipment. In 2002, faculty were asked about computer equipment, and expressed moderate

satisfaction with the working order and capabilities of the computer equipment they use at their university. The overall rating was 7.50. The level of satisfaction with the working order and capabilities of computer equipment did not differ by rank or discipline.

Faculty also rated their satisfaction with the working order and capabilities network equipment. The average satisfaction rating was 7.69, and this rating did differ by discipline as illustrated in Table 32. Education faculty were more satisfied than were faculty in science and math ($p<.05$) and behavioral and social sciences ($p<.05$).

Table 32: Satisfaction with Campus Network Equipment.

QI4A10B Satisfaction with Working Order and Capabilities of University Network Equipment

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	230	7.54	2.06	0	10
2 Business	340	7.66	1.78	2	10
3 Education	451	7.92	1.77	0	10
4 Engineering/Computer Science	236	7.74	1.67	0	10
5 Humanities	358	7.84	1.84	0	10
6 Science & Math	459	7.52	1.77	0	10
7 Behavioral/Social Sciences	776	7.58	1.89	0	10
8 Professional/Technical	247	7.87	1.68	2	10
Total	3097	7.69	1.82	0	10

Faculty expressed satisfaction with the working order and capabilities of the telephone equipment that they use. Overall, the average satisfaction rating was 7.57. There was no change from the 2000 administration.

Satisfaction with the working order and capabilities of the telephone equipment used by faculty varied by rank. As indicated in Table 33a, assistant professors were less satisfied with the telephone equipment they use than were full professors ($p<.001$) and lecturers ($p<.01$).

Table 33a: Satisfaction with Telephone Equipment by Rank.

QI4A11 Satisfaction with Working Order and Capabilities of Telephone Equipment

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3510	7.66	2.16	0	10
2 Associate Professor	1042	7.52	2.19	0	10
3 Assistant Professor	1201	7.29	2.41	0	10
4 Lecturer	658	7.68	2.33	0	10
Total	6411	7.57	2.23	0	10

Satisfaction with the telephone equipment used by faculty also varied by discipline. Table 33b shows the average telephone equipment satisfaction rating for the different disciplines. Behavioral and social science faculty, as well as science and math faculty, expressed less satisfaction with the working order and capabilities of the telephone equipment than did engineering and computer science and education faculty.

Table 33b: Satisfaction with Telephone Equipment by Discipline.

QI4A11 Satisfaction with Working Order and Capabilities of Telephone Equipment

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	485	7.46	2.41	0	10
2 Business	696	7.73	2.14	0	10
3 Education	905	7.83	2.10	0	10
4 Engineering/Computer Science	445	7.91	1.83	1	10
5 Humanities	743	7.59	2.33	0	10
6 Science & Math	1050	7.44	2.19	0	10
7 Behavioral/Social Sciences	1603	7.41	2.34	0	10
8 Professional/Technical	492	7.46	2.30	0	10
Total	6419	7.57	2.23	0	10

The satisfaction level of faculty with video conferencing equipment could be improved considerably. The average satisfaction rating with the working order and capabilities of the video conferencing equipment was only 5.92.

There was a difference between two disciplines in their average satisfaction rating with video conferencing equipment. Specifically, education faculty were more satisfied than faculty in science and math with video conferencing equipment ($p<.01$). Average video conferencing equipment satisfaction ratings are displayed by discipline in Table 34a.

Table 34a: Satisfaction with Video-Conferencing Equipment by Discipline.

QI4A12 Satisfaction with Working Order and Capabilities of Video Conferencing Equipment

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	144	5.60	3.15	0	10
2 Business	275	5.72	2.64	0	10
3 Education	411	6.31	2.77	0	10
4 Engineering/Computer Science	198	5.93	2.69	0	10
5 Humanities	243	5.90	3.00	0	10
6 Science & Math	264	5.47	2.62	0	10
7 Behavioral/Social Sciences	527	5.90	2.88	0	10
8 Professional/Technical	238	6.22	2.67	0	10
Total	2300	5.92	2.81	0	10

The satisfaction rating with video conferencing equipment declined from the first administration to the second. As Table 34b shows, the satisfaction with video conferencing equipment was rated at 6.15 in 2000 and 5.70 in 2002 ($p<.001$).

Table 34b: Satisfaction with Video-Conferencing Equipment by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
QI4A12 Satisfaction with Working Order and Capabilities of Video Conferencing Equipment	1 2000 AY	1115	6.15	2.73
	2 2002 AY	1185	5.70	2.86

Online Resources

Faculty were asked about their use of and satisfaction with on-line resources. Specifically, they were asked if they used electronic information resources such as online interlibrary loan, online database searches, or online catalogs. Most (88.1%) of the faculty reported using on-line information resources.

The likelihood that faculty reported using online information resources varied by rank ($p<.001$). Table 35a shows that assistant and associate professors were more likely to use electronic information resources than were full professors, who were more likely to do so than were lecturers.

Table 35a: Use of Electronic Information Resources by Rank.

			QI1D1 Respondent Uses Electronic Information Resources, Such as Online Interlibrary Loan, Online Database Searches, and Online Catalogs		
			0 No	1 Yes	Total
QJOB6 Academic Rank	1 Professor	Count	478	3034	3512
		% within QJOB6 Academic Rank	13.6%	86.4%	100.0%
	2 Associate Professor	Count	90	953	1043
		% within QJOB6 Academic Rank	8.6%	91.4%	100.0%
	3 Assistant Professor	Count	62	1140	1202
		% within QJOB6 Academic Rank	5.2%	94.8%	100.0%
	4 Lecturer	Count	132	528	660
		% within QJOB6 Academic Rank	20.0%	80.0%	100.0%
Total		Count	762	5655	6417
		% within QJOB6 Academic Rank	11.9%	88.1%	100.0%

The likelihood of using online information resources also depended on discipline ($p<.001$). This is illustrated in Table 35b. Art faculty were less likely to use online information resources than were other faculty.

Table 35b: Use of Electronic Information Resources by Discipline.

			QI1D1 Respondent Uses Electronic Information Resources, Such as Online Interlibrary Loan, Online Database Searches, and Online Catalogs		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	101	387	488
		% within DEPCODE3 Department Code	20.7%	79.3%	100.0%
	2 Business	Count	95	604	699
		% within DEPCODE3 Department Code	13.6%	86.4%	100.0%
	3 Education	Count	119	787	906
		% within DEPCODE3 Department Code	13.1%	86.9%	100.0%
	4 Engineering/Computer Science	Count	72	373	445
		% within DEPCODE3 Department Code	16.2%	83.8%	100.0%
	5 Humanities	Count	66	677	743
		% within DEPCODE3 Department Code	8.9%	91.1%	100.0%
	6 Science & Math	Count	122	925	1047
		% within DEPCODE3 Department Code	11.7%	88.3%	100.0%
	7 Behavioral/Social Sciences	Count	143	1460	1603
		% within DEPCODE3 Department Code	8.9%	91.1%	100.0%
	8 Professional/Technical	Count	48	446	494
		% within DEPCODE3 Department Code	9.7%	90.3%	100.0%
Total		Count	766	5659	6425
		% within DEPCODE3 Department Code	11.9%	88.1%	100.0%

Year of administration was also related to the likelihood of using online information resources ($p<.001$). This is seen in Table 35c. While 90.0 percent of faculty in 2000 used online information resources, this dropped to 86.2 percent in 2002.

Table 35c: Use of Electronic Information Resources by Administration.

			QI1D1 Respondent Uses Electronic Information Resources, Such as Online Interlibrary Loan, Online Database Searches, and Online Catalogs		
			0 No	1 Yes	Total
ADMIN SURVEY ADMINISTRATION	1 2000 AY	Count	314	2832	3146
		% within ADMIN SURVEY ADMINISTRATION	10.0%	90.0%	100.0%
	2 2002 AY	Count	452	2827	3279
		% within ADMIN SURVEY ADMINISTRATION	13.8%	86.2%	100.0%
Total		Count	766	5659	6425
		% within ADMIN SURVEY ADMINISTRATION	11.9%	88.1%	100.0%

Those faculty reporting that they had used online information resources were asked about their satisfaction with the quality of the online information resources. On the zero-to-ten satisfaction scale, the average rating was 7.63.

Though satisfaction with the *quality* of the online information resources was consistent across ranks and year, it did vary by discipline. This is illustrated in Table 36. Science and math faculty were less satisfied with the quality of the online information resources than those in most other disciplines.

Table 36: Satisfaction with the Quality of Electronic Information Resources.

Q1D1A Satisfaction with the Quality of the Electronic Information Resources

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	384	7.73	1.73	2	10
2 Business	597	7.56	1.80	0	10
3 Education	780	7.74	1.70	0	10
4 Engineering/Computer Science	368	7.48	1.69	0	10
5 Humanities	674	7.84	1.83	1	10
6 Science & Math	917	7.29	1.86	0	10
7 Behavioral/Social Sciences	1450	7.68	1.71	0	10
8 Professional/Technical	444	7.73	1.58	2	10
Total	5614	7.63	1.76	0	10

The faculty members who used online information resources were also asked about their satisfaction with the *quantity* of the online information resources available through their campus library. The average satisfaction rating was 7.27.

The level of satisfaction with the quantity of the online information resources varied by academic rank. Full professors and lecturers were more satisfied than were assistant professors ($p<.001$), and lecturers were also more satisfied than were associate professors ($p<.01$). This is shown in Table 37a.

Table 37a: Satisfaction with the Quantity of Electronic Information Resources by Rank.

Q1D1B Satisfaction with the Quantity of the Electronic Library Resources Through the Campus Library

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	2899	7.34	1.96	0	10
2 Associate Professor	923	7.17	2.01	0	10
3 Assistant Professor	1117	7.06	2.02	0	10
4 Lecturer	507	7.53	1.91	1	10
Total	5446	7.27	1.98	0	10

Satisfaction with the quantity of the online information resources also varied by discipline. Table 37b shows that science and math faculty were less satisfied than were faculty in all other disciplines, and engineering and computer science faculty were less satisfied than those in all other disciplines except science and math.

Table 37b: Satisfaction with the Quantity of Electronic Information Resources by Discipline.

Q1D1B Satisfaction with the Quantity of the Electronic Library Resources Through the Campus Library

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	365	7.53	1.93	0	10
2 Business	584	7.23	2.03	0	10
3 Education	767	7.55	1.87	0	10
4 Engineering/Computer Science	353	6.95	1.92	1	10
5 Humanities	659	7.59	1.95	1	10
6 Science & Math	879	6.55	2.15	0	10
7 Behavioral/Social Sciences	1412	7.41	1.88	0	10
8 Professional/Technical	431	7.40	1.77	0	10
Total	5450	7.27	1.98	0	10

Faculty were also satisfied with the ease of use of the electronic library resources through their campus library. The average satisfaction rating was 7.43.

Faculty satisfaction with the ease of use of the online information resources differed by academic rank. That is, full professors were less satisfied than were assistant professors ($p<.05$) and lecturers ($p<.05$). This is illustrated in Table 38a.

Table 38a: Satisfaction with the Ease of Use of the Electronic Information Resources by Rank.

Q1D1C Satisfaction with the Ease of Use of the Electronic Library Resources Through the Campus Library

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	2950	7.36	1.97	0	10
2 Associate Professor	939	7.40	1.93	0	10
3 Assistant Professor	1127	7.57	1.84	1	10
4 Lecturer	515	7.62	1.80	0	10
Total	5531	7.43	1.92	0	10

Academic discipline was also related to satisfaction with the ease of use of the online information resources. As Table 38b shows, science and math faculty were less satisfied than were faculty in humanities ($p<.01$) and education ($p<.05$).

Table 38b: Satisfaction with the Ease of Use of the Electronic Information Resources by Discipline.

Q1D1C Satisfaction with the Ease of Use of the Electronic Library Resources Through the Campus Library

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	378	7.49	2.08	0	10
2 Business	589	7.38	1.88	1	10
3 Education	773	7.52	1.91	0	10
4 Engineering/Computer Science	362	7.40	1.82	0	10
5 Humanities	664	7.61	1.95	0	10
6 Science & Math	898	7.22	1.92	0	10
7 Behavioral/Social Sciences	1434	7.47	1.95	0	10
8 Professional/Technical	437	7.39	1.80	0	10
Total	5535	7.43	1.92	0	10

There was a change in satisfaction with the ease of use of the online information resources from the first administration to the second. Table 38c shows the satisfaction increased for 7.35 in 2000 to 7.52 in 2002 ($p<.01$).

Table 38c: Satisfaction with the Ease of Use of the Electronic Information Resources by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1D1C Satisfaction with the Ease of Use of the Electronic Library Resources Through the Campus Library	1 2000 AY	2764	7.35	1.94
	2 2002 AY	2771	7.52	1.91

Administrative Information Systems

Faculty were asked if they used their campus online information system to get student records for the purpose of academic advisement. Over half (53.5%) of the faculty reported using their campus online information system to access student records for academic advisement.

The likelihood that faculty accessed student record information online varied by rank ($p<.001$). This is illustrated in Table 39a, which shows that the higher the rank, the more likely the person was to access student record information online for the purpose of academic advisement; 57.9% of full professors and 42.2% of lecturers reported using their campus online information system to get student records.

Table 39a: Use of the Campus Online Information System to Get Student Records by Rank.

			Q3A1A Respondent Uses the Campus Online Information System to Get Student Records for the Purpose of Academic Advisement		
			0 No	1 Yes	Total
QJOB6 Academic Rank	1 Professor	Count	1474	2024	3498
		% within QJOB6 Academic Rank	42.1%	57.9%	100.0%
	2 Associate Professor	Count	500	541	1041
		% within QJOB6 Academic Rank	48.0%	52.0%	100.0%
	3 Assistant Professor	Count	620	574	1194
		% within QJOB6 Academic Rank	51.9%	48.1%	100.0%
	4 Lecturer	Count	376	275	651
		% within QJOB6 Academic Rank	57.8%	42.2%	100.0%
Total		Count	2970	3414	6384
		% within QJOB6 Academic Rank	46.5%	53.5%	100.0%

The likelihood that faculty accessed student record information online also varied by discipline ($p<.001$). Faculty in engineering and computer science, as well as those in professional/technical disciplines, were more likely than others to access student record information online, while those in business were less likely than others to access student record information for student advisement. This is seen in Table 39b.

Table 39b: Use of the Campus Online Information System to Get Student Records by Discipline.

			Q3A1A Respondent Uses the Campus Online Information System to Get Student Records for the Purpose of Academic Advisement		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	243	240	483
		% within DEPCODE3 Department Code	50.3%	49.7%	100.0%
	2 Business	Count	389	305	694
		% within DEPCODE3 Department Code	56.1%	43.9%	100.0%
	3 Education	Count	396	505	901
		% within DEPCODE3 Department Code	44.0%	56.0%	100.0%
	4 Engineering/Computer Science	Count	139	304	443
		% within DEPCODE3 Department Code	31.4%	68.6%	100.0%
	5 Humanities	Count	402	335	737
		% within DEPCODE3 Department Code	54.5%	45.5%	100.0%
	6 Science & Math	Count	448	596	1044
		% within DEPCODE3 Department Code	42.9%	57.1%	100.0%
	7 Behavioral/Social Sciences	Count	784	812	1596
		% within DEPCODE3 Department Code	49.1%	50.9%	100.0%
	8 Professional/Technical	Count	176	318	494
		% within DEPCODE3 Department Code	35.6%	64.4%	100.0%
Total		Count	2977	3415	6392
		% within DEPCODE3 Department Code	46.6%	53.4%	100.0%

Those who reported using their campus online information system were asked how satisfied they were with online access to student record information. Respondents were somewhat satisfied. The average satisfaction rating was 6.49.

The level of satisfaction with online access to student record information was qualified by rank. That is, lecturers were more satisfied than were the other faculty. This is illustrated in Table 40a.

Table 40a: Satisfaction with Online Access to Student Record Information by Rank.

Q3A1B Satisfaction with Online Access to Get Student Record Information

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	2005	6.54	2.60	0	10
2 Associate Professor	534	6.22	2.62	0	10
3 Assistant Professor	568	6.31	2.62	0	10
4 Lecturer	274	7.01	2.36	0	10
Total	3381	6.49	2.60	0	10

Satisfaction with online access to student record information also depended on year of administration, as shown in Table 40b. In 2000 the average satisfaction rating was 6.63, but dropped to 6.35 in 2002 ($p<.01$).

Table 40b: Satisfaction with Online Access to Student Record Information by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q3A1B Satisfaction with Online Access to Get Student Record Information	1 2000 AY	1670	6.63	2.59
	2 2002 AY	1712	6.35	2.59

Help and Technical Support

Respondents were asked about their access to help with university-provided computer equipment if they have trouble after it has been installed. Almost all (97.8%) respondents said they had access to help if they have trouble with their university-provided computer after it has been installed.

The likelihood of faculty reporting access to help was qualified by discipline ($p<.01$). Table 41 shows that professional/technical faculty were slightly more likely than others to report that they had access to help if they had trouble with their university-provided computer.

Table 41: Access to Help if Respondent Has Trouble with a University-Provided Computer by Discipline.

			QI4A5 Respondent Has Access to Help if He/She Has Trouble with a University-Provided Computer		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	10	451	461
		% within DEPCODE3 Department Code	2.2%	97.8%	100.0%
	2 Business	Count	12	664	676
		% within DEPCODE3 Department Code	1.8%	98.2%	100.0%
	3 Education	Count	10	868	878
		% within DEPCODE3 Department Code	1.1%	98.9%	100.0%
	4 Engineering/Computer Science	Count	19	405	424
		% within DEPCODE3 Department Code	4.5%	95.5%	100.0%
	5 Humanities	Count	17	699	716
		% within DEPCODE3 Department Code	2.4%	97.6%	100.0%
	6 Science & Math	Count	25	959	984
		% within DEPCODE3 Department Code	2.5%	97.5%	100.0%
	7 Behavioral/Social Sciences	Count	38	1517	1555
		% within DEPCODE3 Department Code	2.4%	97.6%	100.0%
	8 Professional/Technical	Count	5	475	480
		% within DEPCODE3 Department Code	1.0%	99.0%	100.0%
Total		Count	136	6038	6174
		% within DEPCODE3 Department Code	2.2%	97.8%	100.0%

Those reporting that they had access to help if they had trouble with their university-provided computer were asked in the 2002 administration if they had received help in the past two years. Most (93.5%) of the faculty with access to help had used that help in the past two years. The likelihood of having received help varied by rank ($p<.001$), as shown in Table 42a. That is, lecturers were less likely than others, and full professors were more likely than others, to receive help to solve a problem with their university-provided computer in the past two years.

Table 42a: Received Technical Help to Solve a Computer Problem by Rank.

			Q4A5E2 Respondent Has Received Technical Help to Solve a Problem with University-Provided Computer		
			0 No	1 Yes	Total
QJOB6 Academic Rank	1 Professor	Count	74	1551	1625
		% within QJOB6 Academic Rank	4.6%	95.4%	100.0%
	2 Associate Professor	Count	42	458	500
		% within QJOB6 Academic Rank	8.4%	91.6%	100.0%
	3 Assistant Professor	Count	54	591	645
		% within QJOB6 Academic Rank	8.4%	91.6%	100.0%
	4 Lecturer	Count	33	297	330
		% within QJOB6 Academic Rank	10.0%	90.0%	100.0%
Total		Count	203	2897	3100
		% within QJOB6 Academic Rank	6.5%	93.5%	100.0%

Academic discipline was also associated with the likelihood of receiving technical help to solve a problem with their university-provided computer in the past two years ($p<.05$). Table 42b shows that science and math faculty were less likely than other faculty to receive technical help, and professional/technical faculty were more likely to do so.

Table 42b: Received Technical Help to Solve a Computer Problem by Discipline.

			Q4A5E2 Respondent Has Received Technical Help to Solve a Problem with University-Provided Computer		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	14	221	235
		% within DEPCODE3 Department Code	6.0%	94.0%	100.0%
	2 Business	Count	27	316	343
		% within DEPCODE3 Department Code	7.9%	92.1%	100.0%
	3 Education	Count	18	427	445
		% within DEPCODE3 Department Code	4.0%	96.0%	100.0%
	4 Engineering/Computer Science	Count	15	209	224
		% within DEPCODE3 Department Code	6.7%	93.3%	100.0%
	5 Humanities	Count	29	337	366
		% within DEPCODE3 Department Code	7.9%	92.1%	100.0%
	6 Science & Math	Count	41	409	450
		% within DEPCODE3 Department Code	9.1%	90.9%	100.0%
	7 Behavioral/Social Sciences	Count	50	738	788
		% within DEPCODE3 Department Code	6.3%	93.7%	100.0%
	8 Professional/Technical	Count	9	243	252
		% within DEPCODE3 Department Code	3.6%	96.4%	100.0%
Total		Count	203	2900	3103
		% within DEPCODE3 Department Code	6.5%	93.5%	100.0%

Those receiving technical help with their university-provided computer in the past two years were asked about a number of aspects about that help. They were first asked how often they received technical help. The frequency of receiving help was dependent on rank ($p<.01$), as shown in Table 43a. Lecturers and assistant professors received technical help less frequently than did associate and full professors.

Table 43a: Frequency of Receiving Technical Help to Solve a Computer Problem by Rank.

			Q4A5E3 Number of Times Respondent Received Technical Help to Solve a Problem with University-Provided Computer				
			1 One to Two Times	2 Three to Five Times	3 Six to Ten Times	4 More Than Ten Times	Total
QJOB6 Academic Rank	1 Professor	Count	387	673	289	200	1549
		% within QJOB6 Academic Rank	25.0%	43.4%	18.7%	12.9%	100.0%
	2 Associate Professor	Count	112	198	94	54	458
		% within QJOB6 Academic Rank	24.5%	43.2%	20.5%	11.8%	100.0%
	3 Assistant Professor	Count	192	245	96	57	590
		% within QJOB6 Academic Rank	32.5%	41.5%	16.3%	9.7%	100.0%
	4 Lecturer	Count	101	118	50	28	297
		% within QJOB6 Academic Rank	34.0%	39.7%	16.8%	9.4%	100.0%
Total		Count	792	1234	529	339	2894
		% within QJOB6 Academic Rank	27.4%	42.6%	18.3%	11.7%	100.0%

Help frequency also varied by discipline ($p<.05$). Table 43b shows that education and professional/technical faculty received technical help more frequently than did faculty in other disciplines.

Table 43b: Frequency of Receiving Technical Help to Solve a Computer Problem by Discipline.

			Q4A5E3 Number of Times Respondent Received Technical Help to Solve a Problem with University-Provided Computer				
			1 One to Two Times	2 Three to Five Times	3 Six to Ten Times	4 More Than Ten Times	Total
DEPCODE3 Department Code	1 Art	Count	59	90	50	22	221
		% within DEPCODE3 Department Code	26.7%	40.7%	22.6%	10.0%	100.0%
	2 Business	Count	87	142	51	36	316
		% within DEPCODE3 Department Code	27.5%	44.9%	16.1%	11.4%	100.0%
	3 Education	Count	101	172	91	63	427
		% within DEPCODE3 Department Code	23.7%	40.3%	21.3%	14.8%	100.0%
	4 Engineering/ Computer Science	Count	74	75	33	27	209
		% within DEPCODE3 Department Code	35.4%	35.9%	15.8%	12.9%	100.0%
	5 Humanities	Count	104	137	63	32	336
		% within DEPCODE3 Department Code	31.0%	40.8%	18.8%	9.5%	100.0%
	6 Science & Math	Count	128	181	60	40	409
		% within DEPCODE3 Department Code	31.3%	44.3%	14.7%	9.8%	100.0%
	7 Behavioral/ Social Sciences	Count	185	331	138	83	737
		% within DEPCODE3 Department Code	25.1%	44.9%	18.7%	11.3%	100.0%
	8 Professional/ Technical	Count	54	107	43	38	242
		% within DEPCODE3 Department Code	22.3%	44.2%	17.8%	15.7%	100.0%
Total		Count	792	1235	529	341	2897
		% within DEPCODE3 Department Code	27.3%	42.6%	18.3%	11.8%	100.0%

Faculty receiving help were also asked how frequently the problems they had were solved to their satisfaction. Their responses depended on their rank ($p<.05$), as illustrated in Table 44. The differences, however, amounted to how likely faculty were to report being satisfied all of the time as opposed to most of the time. Lecturers were more likely than other faculty to say they were satisfied all of the time, and associate professors were less likely to do so.

Table 44: How Often Problems with University-Provided Computer Were Resolved to Respondent's Satisfaction by Rank.

			Q4A5E4 Number of Times Problems with University-Provided Computer Were Resolved to Respondent's Satisfaction				
			1 All of the Time	2 Most of the Time	3 Some of the Time	4 None of the Time	Total
QJOB6 Academic Rank	1 Professor	Count	739	609	182	17	1547
		% within QJOB6 Academic Rank	47.8%	39.4%	11.8%	1.1%	100.0%
	2 Associate Professor	Count	191	197	63	7	458
		% within QJOB6 Academic Rank	41.7%	43.0%	13.8%	1.5%	100.0%
	3 Assistant Professor	Count	281	219	86	4	590
		% within QJOB6 Academic Rank	47.6%	37.1%	14.6%	.7%	100.0%
	4 Lecturer	Count	160	90	42	4	296
		% within QJOB6 Academic Rank	54.1%	30.4%	14.2%	1.4%	100.0%
Total		Count	1371	1115	373	32	2891
		% within QJOB6 Academic Rank	47.4%	38.6%	12.9%	1.1%	100.0%

Respondents were asked about how satisfied they were with the time it took to resolve the problem with their university-provided computer. Overall, they were moderately satisfied, offering an average satisfaction rating of 7.13. This rating, though, depended on discipline. Table 45 shows that business faculty were more satisfied with the time it took than were art ($p<.05$) and science and math faculty ($p<.01$).

Table 45: Satisfaction with the Time it Took to Resolve the Problem by Discipline.

Q4A5E5 Satisfaction with the Time it Took to Resolve Problem With University-Provided Computer

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	217	6.82	2.78	0	10
2 Business	311	7.52	2.14	0	10
3 Education	422	7.32	2.47	0	10
4 Engineering/Computer Science	209	7.30	2.21	0	10
5 Humanities	332	7.05	2.57	0	10
6 Science & Math	403	6.84	2.47	0	10
7 Behavioral/Social Sciences	727	7.14	2.42	0	10
8 Professional/Technical	237	6.95	2.58	0	10
Total	2858	7.13	2.46	0	10

Faculty receiving help were asked if help was provided by someone in their own unit or department. A majority (54.8%) of the faculty said that technical help they received was provided by someone in their own unit or department. However, this varied by rank ($p<.001$). Table 46a shows that 42.6 percent of assistant professors said they received help provided from someone in their unit or department, while over half of the faculty at other ranks reported receiving help from someone in their unit or department.

Table 46a: Computer Assistance Provided by Someone in Their Unit or Department by Rank.

			Q4A5E6 Assistance with University-Provided Computer Provided by Employee or Colleague in Unit or Department		
			0 No	1 Yes	Total
QJOB6 Academic Rank	1 Professor	Count	631	903	1534
		% within QJOB6 Academic Rank	41.1%	58.9%	100.0%
	2 Associate Professor	Count	193	262	455
		% within QJOB6 Academic Rank	42.4%	57.6%	100.0%
	3 Assistant Professor	Count	336	249	585
		% within QJOB6 Academic Rank	57.4%	42.6%	100.0%
	4 Lecturer	Count	139	155	294
		% within QJOB6 Academic Rank	47.3%	52.7%	100.0%
Total		Count	1299	1569	2868
		% within QJOB6 Academic Rank	45.3%	54.7%	100.0%

Receipt of help from someone in their unit or department also varied greatly by discipline ($p<.001$). This is illustrated in Table 46b, with the likelihood of receiving help from someone in their own unit or department ranging from 35.8 percent for humanities faculty to 71.8 percent for engineering and computer science faculty.

Table 46b: Computer Assistance Provided by Someone in Their Unit or Department by Discipline.

			Q4A5E6 Assistance with University-Provided Computer Provided by Employee or Colleague in Unit or Department		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	103	117	220
		% within DEPCODE3 Department Code	46.8%	53.2%	100.0%
	2 Business	Count	140	172	312
		% within DEPCODE3 Department Code	44.9%	55.1%	100.0%
	3 Education	Count	157	268	425
		% within DEPCODE3 Department Code	36.9%	63.1%	100.0%
	4 Engineering/Computer Science	Count	58	148	206
		% within DEPCODE3 Department Code	28.2%	71.8%	100.0%
	5 Humanities	Count	215	120	335
		% within DEPCODE3 Department Code	64.2%	35.8%	100.0%
	6 Science & Math	Count	134	266	400
		% within DEPCODE3 Department Code	33.5%	66.5%	100.0%
	7 Behavioral/Social Sciences	Count	395	336	731
		% within DEPCODE3 Department Code	54.0%	46.0%	100.0%
	8 Professional/Technical	Count	97	145	242
		% within DEPCODE3 Department Code	40.1%	59.9%	100.0%
Total		Count	1299	1572	2871
		% within DEPCODE3 Department Code	45.2%	54.8%	100.0%

All faculty in 2002 were asked about the extent to which they rely on technical support people to solve computer problems. Faculty offered an average rating of 6.55 on a zero-to-ten scale, suggesting that they were somewhat reliant on technical support people to solve computer problems. The extent to which faculty rely on technical support people to solve computer problems differed by rank. That is, full professors were more reliant than other faculty on technical support people. This is seen in Table 47a. Additionally, associate professors relied on technical support people more so than assistant professors ($p<.01$).

Table 47a: Extent to Which Faculty Rely on Technical Support Personnel to Solve Computer Problems by Rank.

Q4A5E7 Level of Reliance on Technical Support Personnel to Solve Computer Problems

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	1622	6.93	2.69	0	10
2 Associate Professor	497	6.40	2.87	0	10
3 Assistant Professor	645	5.83	2.65	0	10
4 Lecturer	324	6.29	2.77	0	10
Total	3088	6.55	2.75	0	10

Academic discipline qualified the extent to which faculty rely on technical support people to solve computer problems. Faculty in science and math, as well as engineering and computer science, were less reliant than others, while humanities faculty were more reliant on technical support people to solve computer problems. This is shown in Table 47b.

Table 47b: Extent to Which Faculty Rely on Technical Support Personnel to Solve Computer Problems by Discipline.

Q4A5E7 Level of Reliance on Technical Support Personnel to Solve Computer Problems

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	235	6.84	2.82	0	10
2 Business	343	6.35	2.83	0	10
3 Education	440	6.60	2.67	0	10
4 Engineering/Computer Science	223	6.02	2.72	0	10
5 Humanities	363	7.02	2.68	0	10
6 Science & Math	450	5.93	2.83	0	10
7 Behavioral/Social Sciences	787	6.69	2.72	0	10
8 Professional/Technical	250	6.94	2.54	0	10
Total	3091	6.55	2.75	0	10

Training

Faculty were asked a number of questions regarding participation in and satisfaction with computer training programs aimed at improving basic computer skills. Faculty were asked how important such programs are. Overall, faculty judged such training programs to be very important. They offered an average importance rating of 8.37.

The extent to which faculty rated computer training programs as important depended on the rank of the faculty member. That is, lecturers regarded these training programs as more important than did other faculty. This is illustrated in Table 48a. Further, full professors rated these training programs as more important than did assistant professors ($p<.01$).

Table 48a: Importance of Offering Basic Computer Skills Training to Faculty by Rank.

QI4A7 Importance for Campuses to Offer Training Activities or Programs

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3366	8.41	2.17	0	10
2 Associate Professor	1010	8.23	2.30	0	10
3 Assistant Professor	1166	8.17	2.26	0	10
4 Lecturer	625	8.78	1.87	0	10
Total	6167	8.37	2.19	0	10

The perceived importance of computer training programs aimed at improving basic computer skills also depended on academic discipline. Table 48b shows that faculty in engineering and computer science, as well as science and math, viewed computer training programs aimed at improving basic computer skills as less important than did other faculty.

Table 48b: Importance of Offering Basic Computer Skills Training to Faculty by Discipline.

QI4A7 Importance for Campuses to Offer Training Activities or Programs

	N	Mean	95% Confidence Upper Bound	Minimum	Maximum
1 Art	459	8.68	8.86	0	10
2 Business	676	8.22	8.39	0	10
3 Education	877	9.01	9.12	0	10
4 Engineering/Computer Science	421	7.81	8.05	0	10
5 Humanities	722	8.64	8.79	0	10
6 Science & Math	982	7.47	7.63	0	10
7 Behavioral/Social Sciences	1557	8.46	8.56	0	10
8 Professional/Technical	481	8.82	8.99	0	10
Total	6175	8.37	8.43	0	10

There was also a difference in the ratings of importance between the first and second administrations. Table 48c shows that the importance of offering basic computer skills training decreased from 8.51 in 2000 to 8.24 in 2002 ($p<.001$).

Table 48c: Importance of Offering Basic Computer Skills Training to Faculty by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
QI4A7 Importance for Campuses to Offer Training Activities or Programs	1 2000 AY	3000	8.51	2.09
	2 2002 AY	3175	8.24	2.27

The different types of programs that faculty participated in was of interest. Consequently, faculty were asked about the types of training programs they participated in, and how satisfied they were with the training programs in general. They types of programs in which faculty participated are displayed in Table 49. Workshops were the most commonly used type of training. Nearly two-thirds (64.8%) of the faculty had participated in a computer skills workshop. Almost half (47.7%) the respondents had participated in computer-based training, but the other types of training were not commonly used.

Table 49: Participation in Training Programs.

	0 Not Chosen		1 Chosen	
	Count	%	Count	%
Workshop	2187	35.2%	4027	64.8%
Computer-Based Training	3247	52.3%	2967	47.7%
Other	5656	91.0%	558	9.0%

As noted above, most of the faculty had participated in a computer skills workshop. The likelihood of participating in a workshop varied by rank ($p<.001$). That is, assistant professors were less likely than other faculty to participate in workshops. Table 50a displays the percentages of faculty participating in workshops by rank.

Table 50a: Participated in a Workshop by Rank.

			QI4A8A_3 Participated in a Workshop		
			0 Not Chosen	1 Chosen	Total
QJOB6 Academic Rank	1 Professor	Count	1082	2308	3390
		% within QJOB6 Academic Rank	31.9%	68.1%	100.0%
	2 Associate Professor	Count	363	655	1018
		% within QJOB6 Academic Rank	35.7%	64.3%	100.0%
	3 Assistant Professor	Count	497	674	1171
		% within QJOB6 Academic Rank	42.4%	57.6%	100.0%
	4 Lecturer	Count	243	384	627
		% within QJOB6 Academic Rank	38.8%	61.2%	100.0%
Total		Count	2185	4021	6206
		% within QJOB6 Academic Rank	35.2%	64.8%	100.0%

The likelihood of participating in a workshop varied considerably depending on academic discipline ($p<.001$). This is seen in Table 50b, which shows that the percentage of faculty within a

discipline participating in a workshop ranged from 51.0 percent for science and math faculty to 78.0 percent for professional/technical.

Table 50b: Participated in a Workshop by Discipline.

			QI4A8A_3 Participated in a Workshop		
			0 Not Chosen	1 Chosen	Total
DEPCODE3 Department Code	1 Art	Count	194	269	463
		% within DEPCODE3 Department Code	41.9%	58.1%	100.0%
	2 Business	Count	220	461	681
		% within DEPCODE3 Department Code	32.3%	67.7%	100.0%
	3 Education	Count	218	664	882
		% within DEPCODE3 Department Code	24.7%	75.3%	100.0%
	4 Engineering/Computer Science	Count	182	244	426
		% within DEPCODE3 Department Code	42.7%	57.3%	100.0%
	5 Humanities	Count	242	481	723
		% within DEPCODE3 Department Code	33.5%	66.5%	100.0%
	6 Science & Math	Count	486	505	991
		% within DEPCODE3 Department Code	49.0%	51.0%	100.0%
	7 Behavioral/Social Sciences	Count	539	1028	1567
		% within DEPCODE3 Department Code	34.4%	65.6%	100.0%
	8 Professional/Technical	Count	106	375	481
		% within DEPCODE3 Department Code	22.0%	78.0%	100.0%
Total		Count	2187	4027	6214
		% within DEPCODE3 Department Code	35.2%	64.8%	100.0%

Participation in a workshop was less likely in 2002 than it was in 2000 ($p<.05$). That is, 66.3 percent of faculty in 2000 participated in a workshop to improve basic computer skills compared to 63.4 percent in 2002. Table 50c illustrates this point.

Table 50c: Participated in a Workshop by Administration.

			QI4A8A_3 Participated in a Workshop		
			0 Not Chosen	1 Chosen	Total
ADMIN SURVEY ADMINISTRATION	1 2000 AY	Count	1016	1999	3015
		% within ADMIN SURVEY ADMINISTRATION	33.7%	66.3%	100.0%
	2 2002 AY	Count	1171	2028	3199
		% within ADMIN SURVEY ADMINISTRATION	36.6%	63.4%	100.0%
Total		Count	2187	4027	6214
		% within ADMIN SURVEY ADMINISTRATION	35.2%	64.8%	100.0%

Overall, half the faculty participated in computer-based training. However, participation in computer-based training differed by rank ($p<.001$). Again, assistant professors were less likely to participate than faculty at other ranks. This is seen in Table 51a.

Table 51a: Participated in a Computer-Based Training by Rank.

			QI4A8A_1 Participated in Computer-Based Training		
			0 Not Chosen	1 Chosen	Total
QJOB6 Academic Rank	1 Professor	Count	1691	1699	3390
		% within QJOB6 Academic Rank	49.9%	50.1%	100.0%
	2 Associate Professor	Count	539	479	1018
		% within QJOB6 Academic Rank	52.9%	47.1%	100.0%
	3 Assistant Professor	Count	690	481	1171
		% within QJOB6 Academic Rank	58.9%	41.1%	100.0%
	4 Lecturer	Count	326	301	627
		% within QJOB6 Academic Rank	52.0%	48.0%	100.0%
Total		Count	3246	2960	6206
		% within QJOB6 Academic Rank	52.3%	47.7%	100.0%

Participation in computer-based training varied by discipline ($p<.001$). This is seen in Table 51b. Only a third of science and math, as well as engineering and computer science faculty participated in computer-based training, while professional/technical and education faculty were more likely to participate.

Table 51b: Participated in a Computer-Based Training by Discipline.

			QI4A8A_1 Participated in Computer-Based Training		
			0 Not Chosen	1 Chosen	Total
DEPCODE3 Department Code	1 Art	Count	262	201	463
		% within DEPCODE3 Department Code	56.6%	43.4%	100.0%
	2 Business	Count	357	324	681
		% within DEPCODE3 Department Code	52.4%	47.6%	100.0%
	3 Education	Count	366	516	882
		% within DEPCODE3 Department Code	41.5%	58.5%	100.0%
	4 Engineering/Computer Science	Count	273	153	426
		% within DEPCODE3 Department Code	64.1%	35.9%	100.0%
	5 Humanities	Count	379	344	723
		% within DEPCODE3 Department Code	52.4%	47.6%	100.0%
	6 Science & Math	Count	642	349	991
		% within DEPCODE3 Department Code	64.8%	35.2%	100.0%
	7 Behavioral/Social Sciences	Count	785	782	1567
		% within DEPCODE3 Department Code	50.1%	49.9%	100.0%
	8 Professional/Technical	Count	183	298	481
		% within DEPCODE3 Department Code	38.0%	62.0%	100.0%
Total		Count	3247	2967	6214
		% within DEPCODE3 Department Code	52.3%	47.7%	100.0%

Year of administration was associated with the likelihood of participating in computer-based training ($p<.001$). Table 51c shows that the percentage of faculty participating in computer-based training dropped from 53.0 percent in 2000 to 42.8 percent in 2002.

Table 51c: Participated in a Computer-Based Training by Administration.

			QI4A8A_1 Participated in Computer-Based Training		
			0 Not Chosen	1 Chosen	Total
ADMIN SURVEY ADMINISTRATION	1 2000 AY	Count	1417	1598	3015
		% within ADMIN SURVEY ADMINISTRATION	47.0%	53.0%	100.0%
	2 2002 AY	Count	1830	1369	3199
		% within ADMIN SURVEY ADMINISTRATION	57.2%	42.8%	100.0%
Total		Count	3247	2967	6214
		% within ADMIN SURVEY ADMINISTRATION	52.3%	47.7%	100.0%

Those respondents who reported having participated in any basic computer skills training were asked about their satisfaction with the training in which they participated. Faculty were somewhat satisfied with the training programs – they offered an average satisfaction rating of 7.14 on the zero-to-ten satisfaction scale. Lecturers and assistant professors expressed greater satisfaction than did full ($p<.001$) and associate professors ($p<.01$). This is illustrated in Table 52a.

Table 52a: Satisfaction with Training Programs by Rank.

QI4A8A1 Satisfaction with Training Programs

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	2562	7.00	2.13	0	10
2 Associate Professor	741	7.07	2.18	0	10
3 Assistant Professor	761	7.43	1.85	0	10
4 Lecturer	447	7.53	1.96	0	10
Total	4511	7.14	2.09	0	10

Academic discipline also had a slight impact on the rating of satisfaction with training programs. Table 52b shows that education and professional/technical faculty were more satisfied than were science and math faculty ($p<.001$) with the basic computer skills training in which they participated.

Table 52b: Satisfaction with Training Programs by Discipline.

QI4A8A1 Satisfaction with Training Programs

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	315	7.17	2.28	0	10
2 Business	512	7.16	2.08	0	10
3 Education	731	7.36	2.00	0	10
4 Engineering/Computer Science	268	7.19	1.94	0	10
5 Humanities	529	7.04	2.11	0	10
6 Science & Math	600	6.84	2.14	0	10
7 Behavioral/Social Sciences	1157	7.13	2.10	0	10
8 Professional/Technical	407	7.27	2.01	0	10
Total	4519	7.14	2.09	0	10

Use of Technology in the Classroom

Types of Technology

Computer Software. Faculty members were asked about the types of computer software applications they required students to use in completing assignments for their classes. Table 53 summarizes their responses. Most of the faculty members required students to use word processing software to complete their assignments. Presentation programs were the second most common,

required by over half (54.4%) of faculty in 2002. More than a third of the faculty in 2002 required the use of spreadsheets, graphics and database programs.

Table 53: Types of Software Applications Required in Classes.

ADMIN SURVEY ADMINISTRATION		0 Not Chosen		1 Chosen	
		Count	%	Count	%
1 2000 AY	Word Processing Programs	712	22.9%	2399	77.1%
	Presentation Programs	1840	59.1%	1271	40.9%
	Spreadsheet Programs	1998	64.2%	1113	35.8%
	Graphics Programs	2189	70.4%	922	29.6%
	Database Programs	2370	76.2%	741	23.8%
2 2002 AY	Word Processing Programs	304	11.1%	2433	88.9%
	Presentation Programs	1248	45.6%	1489	54.4%
	Spreadsheet Programs	1442	52.7%	1295	47.3%
	Graphics Programs	1774	64.8%	963	35.2%
	Database Programs	1788	65.3%	949	34.7%

The number of different software programs that faculty required of students in completing assignments was examined. Faculty required an average of 2.46 software applications over the past two years for completing assignments.

The number of software programs that faculty required of students in completing assignments differed by rank. This is seen in Table 54a. Specifically, associate professors required the use of more software programs (2.57) than did assistant professors (2.38) ($p<.05$).

Table 54a: Number of Software Applications Required by Rank.

REQSOFT Number of Software Applications Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3128	2.48	1.62	0	6
2 Associate Professor	972	2.57	1.56	0	6
3 Assistant Professor	1139	2.38	1.47	0	6
4 Lecturer	607	2.36	1.53	0	6
Total	5846	2.46	1.57	0	6

There were also differences in the number of software programs that faculty required of students by discipline. Table 54b reveals the differences among disciplines in the number of software applications for completion of class assignments required by faculty. Faculty in engineering and computer science, as well as business, required students to use a greater number of software applications than did faculty in other disciplines.

Table 54b: Number of Software Applications Required by Discipline.

REQSOFT Number of Software Applications Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	412	1.80	1.36	0	5
2 Business	670	3.22	1.38	0	6
3 Education	840	2.72	1.53	0	6
4 Engineering/Computer Science	435	3.34	1.52	0	6
5 Humanities	645	1.47	1.10	0	6
6 Science & Math	948	2.45	1.69	0	6
7 Behavioral/Social Sciences	1435	2.26	1.53	0	6
8 Professional/Technical	463	2.72	1.45	0	6
Total	5848	2.46	1.57	0	6

There was an increase in the average number of software programs that faculty required students to use in their classes from the 2000 administration to 2002 ($p<.001$). As Table 54c shows, faculty in 2000 required students to use and average of 2.34 software applications, while in 2002 that averaged increased to 2.60.

Table 54c: Number of Software Applications Required by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
REQSOFT Number of Software Applications Required of Students	1 2000 AY	3111	2.34	1.65
	2 2002 AY	2737	2.60	1.47

Types of Technologies. Faculty were also asked what types of technologies they required of students in completing assignments. The responses are summarized in Table 55. Most faculty required use of a computer, the web or Internet, and their campus computer network.

Table 55: Types of Technology Required in Classes.

ADMIN SURVEY ADMINISTRATION		0 Not Chosen		1 Chosen	
		Count	%	Count	%
1 2000 AY	Computer	1121	36.0%	1990	64.0%
	World Wide Web and/or the Internet	858	27.6%	2253	72.4%
	Campus Computer Network	1130	36.3%	1981	63.7%
	Television	2178	70.0%	933	30.0%
	Other Technologies	3027	97.3%	84	2.7%
2 2002 AY	Computer	490	15.2%	2737	84.8%
	World Wide Web and/or the Internet	835	25.9%	2392	74.1%
	Campus Computer Network	1196	37.1%	2031	62.9%
	Television	2260	70.0%	967	30.0%
	Other Technologies	2752	85.3%	475	14.7%

The number of different technologies required varied by faculty rank. As seen in Table 56a, full professors required fewer technologies by their students than did associate professors ($p<.001$), assistant professors ($p<.001$), or lecturers ($p<.001$).

Table 56a: Number of Different Types of Technologies Required by Rank.

REQTECH Number of Types of Technologies Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3448	2.39	1.34	0	5
2 Associate Professor	1036	2.65	1.27	0	5
3 Assistant Professor	1203	2.71	1.22	0	5
4 Lecturer	648	2.65	1.27	0	5
Total	6335	2.52	1.31	0	5

The amount of required technology use also varied by discipline. This is illustrated in Table 56b. Science and math (2.14), art (2.27), and humanities (2.31) faculty required use of the fewest number of types of technologies of their students. Professional/technical (2.88), education (2.83), and engineering and computer science (2.78) disciplines required greater numbers of types of technologies of their students in completing assignments.

Table 56b: Number of Different Types of Technologies Required by Discipline.

REQTECH Number of Types of Technologies Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	477	2.27	1.52	0	5
2 Business	698	2.68	1.05	0	5
3 Education	879	2.83	1.28	0	5
4 Engineering/Computer Science	442	2.78	.97	0	5
5 Humanities	737	2.31	1.45	0	5
6 Science & Math	1043	2.14	1.25	0	5
7 Behavioral/Social Sciences	1580	2.53	1.36	0	5
8 Professional/Technical	482	2.88	1.17	0	5
Total	6338	2.52	1.31	0	5

Overall, there was an increase in the number of technologies required by faculty of students in completing assignments. This is seen in Table 56c. In 2000, faculty required an average of 2.37 technologies, and in 2002 this increased to 2.67 ($p<.001$).

Table 56c: Number of Different Types of Technologies Required by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
REQTECH Number of Types of Technologies Required of Students	1 2000 AY	3111	2.37	1.31
	2 2002 AY	3227	2.67	1.29

Types of Communication Tools. The types of communication tools required of students was also of interest. Faculty were asked which types of communication tools they required their students to use in completing their assignments. As illustrated in Table 57, e-mail use was required most often. This was required by about 60 percent of the faculty members, while electronic bulletin boards, threaded discussions, and chat rooms were required by between 10 and 20 percent of the faculty.

Table 57: Types of Communication Tools Required in Classes.

ADMIN SURVEY ADMINISTRATION		0 Not Chosen		1 Chosen	
		Count	%	Count	%
1 2000 AY	E-Mail	1275	41.0%	1836	59.0%
	Electronic Bulletin Boards	2494	80.2%	617	19.8%
	Threaded Discussions	2652	85.2%	459	14.8%
	Chat Rooms	2800	90.0%	311	10.0%
	Telephone Conferencing	2854	91.7%	257	8.3%
	Video Conferencing	2956	95.0%	155	5.0%
	Other Communications Tools	2980	95.8%	131	4.2%
2 2002 AY	E-Mail	1200	37.2%	2027	62.8%
	Electronic Bulletin Boards	2605	80.7%	622	19.3%
	Threaded Discussions	2719	84.3%	508	15.7%
	Chat Rooms	2871	89.0%	356	11.0%
	Telephone Conferencing	2992	92.7%	235	7.3%
	Video Conferencing	3097	96.0%	130	4.0%
	Other Communications Tools	2987	92.6%	240	7.4%

The number of types of communication tools required was assessed. On average, faculty required students to use 1.24 different communication tools in the previous two years. This varied by faculty rank, as indicated in Table 58a. Full professors required fewer communication tools than did associate ($p<.05$) or assistant professors ($p<.05$).

Table 58a: Number of Communication Tools Required by Rank.

REQCOMM Number of Communication Tools Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3448	1.19	1.32	0	7
2 Associate Professor	1036	1.33	1.33	0	7
3 Assistant Professor	1203	1.30	1.28	0	6
4 Lecturer	648	1.30	1.31	0	6
Total	6335	1.24	1.31	0	7

The number of types of communication tools required also varied by discipline. This is illustrated in Table 58b. The education and professional/technical disciplines required their students to use a greater number of communication tools to complete assignments than those in other disciplines. Science and math and art faculty required the use of fewer communication tools than the other disciplines.

Table 58b: Number of Communication Tools Required by Discipline.

REQCOMM Number of Communication Tools Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	477	.93	1.18	0	7
2 Business	698	1.45	1.32	0	6
3 Education	879	1.76	1.49	0	7
4 Engineering/Computer Science	442	1.40	1.30	0	6
5 Humanities	737	1.13	1.30	0	6
6 Science & Math	1043	.75	.94	0	5
7 Behavioral/Social Sciences	1580	1.18	1.28	0	6
8 Professional/Technical	482	1.64	1.41	0	6
Total	6338	1.24	1.31	0	7

Time of administration was a significant factor determining the number of communication tools faculty required of students. Table 58c shows that in 2002 slightly more communication tools were required than at the time of the previous administration ($p<.05$).

Table 58c: Number of Communication Tools Required by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
REQCOMM Number of Communication Tools Required of Students	1 2000 AY	3111	1.21	1.30
	2 2002 AY	3227	1.28	1.33

Technology-Mediated Resources. Faculty were asked about which technology-mediated resources they required students to use in completing assignments. Table 59 shows that most faculty required use of information web sites and electronic library resources.

Table 59: Types of Technology-Mediated Resources Required in Classes.

ADMIN SURVEY ADMINISTRATION		0 Not Chosen		1 Chosen	
		Count	%	Count	%
1 2000 AY	Information Websites	1236	39.7%	1875	60.3%
	Electronic Library Resources	1248	40.1%	1863	59.9%
	Specialized Sofware Applications	1921	61.7%	1190	38.3%
	Project/Team-Based Activities Employing Information Technologies	2260	72.6%	851	27.4%
	Electronic Data Repositories	2182	70.1%	929	29.9%
	Computer-Based Instruction/Tutorials	2217	71.3%	894	28.7%
	Computer-Based Simulations and/or Animations	2370	76.2%	741	23.8%
	Streaming Video Presentations	2782	89.4%	329	10.6%
	Technology-Mediated Resources	3031	97.4%	80	2.6%
2 2002 AY	Information Websites	725	26.5%	2012	73.5%
	Electronic Library Resources	963	35.2%	1774	64.8%
	Specialized Sofware Applications	1449	52.9%	1288	47.1%
	Project/Team-Based Activities Employing Information Technologies	1819	66.5%	918	33.5%
	Electronic Data Repositories	1877	68.6%	860	31.4%
	Computer-Based Instruction/Tutorials	1918	70.1%	819	29.9%
	Computer-Based Simulations and/or Animations	2021	73.8%	716	26.2%
	Streaming Video Presentations	2341	85.5%	396	14.5%
	Technology-Mediated Resources	2592	94.7%	145	5.3%

Faculty required students to use an average of 3.02 types of technology-mediated resources. The number of types of technology-mediated resources varied by faculty rank. Table 60a shows that lecturers required the use of fewer technology-mediated resources than did associate ($p<.01$) or assistant professors ($p<.01$).

Table 60a: Number of Technolgy-Mediated Resources Required of Students by Rank.

REQTMED Number of Technology-Mediated Resources Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3128	2.99	2.12	0	9
2 Associate Professor	972	3.15	2.00	0	9
3 Assistant Professor	1139	3.13	1.99	0	9
4 Lecturer	607	2.79	1.96	0	8
Total	5846	3.02	2.06	0	9

The engineering and computer science faculty required students to use significantly more technology-mediated resources than those in other disciplines. Additionally, Table 60b shows that humanities faculty required students to use fewer technology-mediated resources than those in other disciplines.

Table 60b: Number of Technolgy-Mediated Resources Required of Students by Discipline.

REQTMED Number of Technology-Mediated Resources Required of Students

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	412	2.73	2.16	0	9
2 Business	670	3.28	1.99	0	9
3 Education	840	3.15	2.09	0	9
4 Engineering/Computer Science	435	4.01	2.04	0	9
5 Humanities	645	2.33	1.82	0	8
6 Science & Math	948	2.97	2.12	0	9
7 Behavioral/Social Sciences	1435	2.88	2.00	0	9
8 Professional/Technical	463	3.30	1.94	0	8
Total	5848	3.02	2.06	0	9

There was also an increase in the number of technology-mediated resources required by faculty from 2000 to 2002. Table 60c shows the number of technology-mediated resources that were required rose from 2.81 in 2000 to 3.26 in 2002 ($p<.001$).

Table 68c: Proportion of Classes Taught That Required E-Mail Use by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C3P Proportion of Classes Taught That Required Use of E-Mail	1 2000 AY	3095	.3613	.4206
	2 2002 AY	2725	.4986	.5043

Distance Learning

Faculty members were queried about their use of and attitudes toward distance learning. Proportionally, very few classes were taught using distance learning. Table 61 shows that the proportion of distance-learning classes is only 0.08. This table also reveals some slight differences among disciplines. That is, the professional/technical faculty (0.12) as well as the education faculty (0.12) taught a higher proportion of their classes using distance learning than did faculty in some other disciplines.

Table 61: Proportion of Classes Taught Using Distance Learning.

Q1A1P Proportion of Classes Taught Using Distance Learning

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	474	.0403	.1492	.00	1.00
2 Business	696	.1032	.2469	.00	1.00
3 Education	879	.1151	.2621	.00	1.00
4 Engineering/Computer Science	439	.0759	.2216	.00	1.00
5 Humanities	733	.0732	.2196	.00	1.00
6 Science & Math	1039	.0565	.1969	.00	1.00
7 Behavioral/Social Sciences	1574	.0715	.2026	.00	1.00
8 Professional/Technical	477	.1244	.2636	.00	1.00
Total	6311	.0808	.2223	.00	1.00

Of the classes taught using at least some distance learning, more than a third (0.36) were taught completely in distance-learning mode.[2] This differed by faculty rank. As shown in Table 62, assistant professors taught a lower proportion of their classes using a completely distance-learning mode compared to lecturers and full professors ($p<.01$).

Table 62: Proportion of Classes Taught in a Completely Distance Learning Mode.

Q1A2PA Proportion of Distance Learning Classes Totally or Completely Taught Using Distance Learning

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	297	.4155	.4727	.00	1.00
2 Associate Professor	99	.3396	.4328	.00	1.00
3 Assistant Professor	124	.2346	.3848	.00	1.00
4 Lecturer	61	.4272	.4898	.00	1.00
Total	581	.3652	.4554	.00	1.00

There was support for distance learning. Faculty were asked how important they thought it was to provide distance-learning opportunities. On a scale of zero to ten, the average response was 5.42.

[2]This form of the question was asked only at the second administration of the survey, and therefore this analysis is limited to Administration 2 data.

The degree to which faculty thought it was important to provide electronic access to course instruction for students at any time, any place varied by academic rank. Full professors saw providing distance learning as less important than did assistant professors ($p<.01$) and lecturers ($p<.001$). Lecturers saw the availability of distance learning as more important than did full and associate professors ($p<.05$). This is seen in Table 63a.

Table 63a: Importance of Electronic Access to Course Instruction at Any Time and Place by Rank.

Q1A3 Importance of Providing Electronic Access to Course Instruction for Students at Any Time and Place

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3367	5.28	3.07	0	10
2 Associate Professor	1016	5.42	3.02	0	10
3 Assistant Professor	1176	5.61	3.04	0	10
4 Lecturer	643	5.88	3.00	0	10
Total	6202	5.42	3.05	0	10

Perceived importance of distance learning also varied by discipline. As shown in Table 63b, the education, business, and professional/technical faculty rated distance learning as more important than did faculty in other disciplines.

Table 63b: Importance of Electronic Access to Course Instruction at Any Time and Place by Discipline.

Q1A3 Importance of Providing Electronic Access to Course Instruction for Students at Any Time and Place

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	465	5.26	3.14	0	10
2 Business	683	6.21	2.87	0	10
3 Education	855	6.20	2.89	0	10
4 Engineering/Computer Science	434	5.74	2.90	0	10
5 Humanities	725	4.91	3.16	0	10
6 Science & Math	1022	4.70	3.00	0	10
7 Behavioral/Social Sciences	1547	5.12	3.07	0	10
8 Professional/Technical	473	6.12	2.85	0	10
Total	6204	5.43	3.06	0	10

Perceived importance of distance learning changed from the first administration to the second. Table 63c shows that in 2000, the average importance rating was 5.80, but in 2002 it dropped to 5.07 ($p<.001$).

Table 63c: Importance of Electronic Access to Course Instruction at Any Time and Place by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1A3 Importance of Providing Electronic Access to Course Instruction for Students at Any Time and Place	1 2000 AY	3037	5.80	3.03
	2 2002 AY	3167	5.07	3.04

Internet. Respondents were asked about the number of classes they taught in which they required students to use different types of technology. They were asked how many classes they taught over the last two years in which they required students to use the Internet. Three-quarters (77.7%) faculty members required students to use the Internet in at least one class over the last two years. Students were required to use the Internet in over half the classes taught by the respondents. That is, the proportion of classes in which Internet use was required was 0.54.

Table 64a shows the proportions of classes in the past two years in which Internet use was required by academic rank. This table shows that full professors required Internet use in a lower proportion of their classes than did assistant professors ($p<.001$) and lecturers ($p<.05$).

Table 64a: Proportion of Classes Taught That Required Internet Use by Rank.

Q1C1P Proportion of Classes Taught That Required Use of the Internet

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3110	.5145	.4659	.00	11.00
2 Associate Professor	967	.5535	.4075	.00	2.00
3 Assistant Professor	1137	.5796	.3939	.00	1.67
4 Lecturer	605	.5687	.4375	.00	4.50
Total	5819	.5393	.4410	.00	11.00

The proportions of classes in which Internet use was required also differed by discipline. Table 64b shows the proportion of classes taught over the last two years that required students to use the Internet for the different disciplines. Art, humanities, and science and math faculty were less likely than other faculty to require Internet use in their classes.

Table 64b: Proportion of Classes Taught That Required Internet Use by Discipline.

Q1C1P Proportion of Classes Taught That Required Use of the Internet

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	408	.4067	.4245	.00	3.00
2 Business	668	.7125	.3930	.00	2.33
3 Education	839	.6552	.4080	.00	3.00
4 Engineering/Computer Science	434	.5582	.6366	.00	11.00
5 Humanities	640	.4400	.4122	.00	2.67
6 Science & Math	948	.4276	.4049	.00	2.00
7 Behavioral/Social Sciences	1428	.5210	.4214	.00	4.50
8 Professional/Technical	456	.6031	.3755	.00	1.10
Total	5821	.5394	.4410	.00	11.00

Required Internet use also varied by administration. Table 64c shows that the proportion of classes taught by faculty that required use of the Internet jumped from 0.48 in 2000 to 0.61 in 2002 ($p<.001$).

Table 64c: Proportion of Classes Taught That Required Internet Use by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C1P Proportion of Classes Taught That Required Use of the Internet	1 2000 AY	3098	.4807	.4133
	2 2002 AY	2723	.6062	.4616

Faculty were asked about their satisfaction with the pedagogical effectiveness of requiring students to use the Internet. The average satisfaction rating was 7.29. The satisfaction level varied by discipline, as illustrated in Table 65a. Business and education faculty reported greater satisfaction than did science and math, humanities, and behavioral and social science faculty.

Table 65a: Satisfaction with the Pedagogical Effectiveness of Requiring Internet Use by Discipline.

Q1C1B Satisfaction with the Pedagogical Effectiveness When Requiring Students to Use the Internet

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	259	7.32	1.93	2	10
2 Business	564	7.68	1.73	0	10
3 Education	699	7.57	1.69	1	10
4 Engineering/Computer Science	346	7.26	1.85	0	10
5 Humanities	447	7.10	1.99	0	10
6 Science & Math	637	7.04	1.87	0	10
7 Behavioral/Social Sciences	1085	7.13	1.94	0	10
8 Professional/Technical	393	7.30	1.86	0	10
Total	4430	7.29	1.87	0	10

The level of satisfaction with the pedagogical effectiveness of requiring students to use the Internet differed between administrations. The average satisfaction rating in 2000 was 6.98, but this rose considerably to 7.59 in 2002 ($p<.001$). This is shown in Table 65b.

Table 65b: Satisfaction with the Pedagogical Effectiveness of Requiring Internet Use by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C1B Satisfaction with the Pedagogical Effectiveness When Requiring Students to Use the Internet	1 2000 AY	2171	6.98	1.84
	2 2002 AY	2259	7.59	1.85

Web postings. More than half (61.0%) of the respondents said they posted class materials on the web in the past two years. Faculty posted class material on the web for over a third (39.2%) of the classes they taught. The proportion of classes for which materials were posted on the web varied by academic rank. This is illustrated in Table 66a. Assistant professors were more likely (0.44) than were full professors (0.38) ($p<.01$) or lecturers (0.35) ($p<.01$) to post class materials on the web.

Table 66a: Proportion of Classes Taught in Which Class Materials Were Posted on the Web by Rank.

Q1C2P Proportion of Classes Taught in Which Class Materials Were Posted on the Web

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3111	.3842	.4639	.00	9.00
2 Associate Professor	967	.3902	.4171	.00	1.25
3 Assistant Professor	1138	.4358	.4215	.00	1.25
4 Lecturer	606	.3496	.4428	.00	4.50
Total	5822	.3917	.4467	.00	9.00

The likelihood of posting class material on the web also depended on academic discipline. There were considerable differences among some disciplines, as revealed in Table 66b. Most notably, business faculty were more likely than faculty in all other disciplines to post materials on the web. In fact, the business faculty were more likely than not (0.59) to post class materials on the web.

Table 66b: Proportion of Classes Taught in Which Class Materials Were Posted on the Web by Discipline.

Q1C2P Proportion of Classes Taught in Which Class Materials Were Posted on the Web

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	409	.2196	.3408	.00	1.00
2 Business	670	.5898	.4547	.00	2.33
3 Education	838	.3675	.4097	.00	2.00
4 Engineering/Computer Science	434	.4730	.5942	.00	9.00
5 Humanities	642	.3001	.4029	.00	3.00
6 Science & Math	945	.4334	.4454	.00	4.25
7 Behavioral/Social Sciences	1430	.3817	.4379	.00	4.50
8 Professional/Technical	456	.2965	.3767	.00	1.00
Total	5824	.3917	.4467	.00	9.00

Posting class materials on the web was more likely in the second administration. Table 66c shows that the proportion courses for which faculty posted material on the web jumped from 0.34 in 2000 to 0.45 in 2002 ($p<.001$).

Table 66c: Proportion of Classes Taught in Which Class Materials Were Posted on the Web by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C2P Proportion of Classes Taught in Which Class Materials Were Posted on the Web	1 2000 AY	3097	.3430	.4034
	2 2002 AY	2727	.4471	.4855

Faculty were satisfied with the pedagogical effectiveness of posting class materials on the web. The average satisfaction rating was 7.21. However, as seen in Table 67a, the level of satisfaction depended on rank. Full professors were less satisfied with the pedagogical effectiveness of posting materials on the web than were assistant professors ($p<.05$).

Table 67a: Satisfaction with the Pedagogical Effectiveness of Posting Class Materials on the Web by Rank.

Q1C2B Satisfaction with the Pedagogical Effectiveness of Posting Class Materials on the Web

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	1784	7.10	2.31	0	10
2 Associate Professor	580	7.23	2.24	0	10
3 Assistant Professor	748	7.38	2.19	0	10
4 Lecturer	334	7.34	2.13	0	10
Total	3446	7.21	2.26	0	10

Satisfaction with the pedagogical effectiveness of posting class materials on the web also varied by discipline. This is seen in Table 67b. Business faculty were more satisfied than faculty in all other disciplines with the pedagogical effectiveness of posting class materials on the web.

Table 67b: Satisfaction with the Pedagogical Effectiveness of Posting Class Materials on the Web by Discipline.

Q1C2B Satisfaction with the Pedagogical Effectiveness of Posting Class Materials on the Web

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	167	6.99	2.39	0	10
2 Business	496	7.83	2.04	0	10
3 Education	496	7.25	2.24	0	10
4 Engineering/Computer Science	304	7.22	2.11	0	10
5 Humanities	323	7.02	2.32	0	10
6 Science & Math	572	7.07	2.35	0	10
7 Behavioral/Social Sciences	841	7.01	2.27	0	10
8 Professional/Technical	248	7.27	2.25	0	10
Total	3447	7.21	2.26	0	10

The faculty rated their satisfaction with the pedagogical effectiveness of posting class materials on the web more highly in 2002 than they did in 2000 ($p<.001$). This is seen in Table 67c, which shows an average satisfaction rating of 6.89 in 201 and 7.52 in 2002.

Table 67c: Satisfaction with the Pedagogical Effectiveness of Posting Class Materials on the Web by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C2B Satisfaction with the Pedagogical Effectiveness of Posting Class Materials on the Web	1 2000 AY	1693	6.89	2.23
	2 2002 AY	1754	7.52	2.24

E-mail. Most (60.2%) of the faculty required their students to use e-mail, and e-mail use was required of students in 42.6 percent of the classes taught in the last two years. The proportion of classes taught that required e-mail use was different for full professors compared to assistant professors and lecturers. As seen in Table 68a, lecturers (0.47) ($p<.01$) and assistant professors (0.45) ($p<.05$) required e-mail use in a higher proportion of their classes than did full professors (0.40).

Table 68a: Proportion of Classes Taught That Required E-Mail Use by Rank.

Q1C3P Proportion of Classes Taught That Required Use of E-Mail

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	3110	.4055	.4815	.00	11.00
2 Associate Professor	968	.4333	.4448	.00	2.86
3 Assistant Professor	1135	.4497	.4362	.00	1.67
4 Lecturer	605	.4716	.4750	.00	4.50
Total	5818	.4256	.4668	.00	11.00

The proportion of classes in which e-mail was required of students also varied by discipline. The proportions of classes in which e-mail was required by discipline are displayed in Table 68b. The business, education and engineering and computer science faculty were more likely than most to require students to use e-mail.

Table 68b: Proportion of Classes Taught That Required E-Mail Use by Discipline.

Q1C3P Proportion of Classes Taught That Required Use of E-Mail

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	408	.3197	.4388	.00	3.00
2 Business	666	.5759	.4690	.00	2.86
3 Education	839	.5702	.4397	.00	2.00
4 Engineering/Computer Science	431	.4946	.6722	.00	11.00
5 Humanities	642	.3563	.4220	.00	2.67
6 Science & Math	948	.2839	.3957	.00	2.00
7 Behavioral/Social Sciences	1429	.3881	.4387	.00	4.50
8 Professional/Technical	457	.4787	.4312	.00	1.83
Total	5820	.4256	.4667	.00	11.00

There was also a difference in the proportion of classes in which e-mail was required of students. The proportion of classes taught that required e-mail use rose from over a third (0.36) in 2000 to half (0.50) in 2002 ($p<.001$). This is seen in Table 68c.

able 68c: Proportion of Classes Taught That Required E-Mail Use by Administratio

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C3P Proportion of Classes Taught That Required Use of E-Mail	1 2000 AY	3095	.3613	.4206
	2 2002 AY	2725	.4986	.5043

Faculty also expressed satisfaction with the pedagogical effectiveness of requiring students to use e-mail. The average satisfaction rating was 7.36. There was some difference in satisfaction ratings among disciplines. The business faculty were more satisfied than were the faculty in some of the other disciplines. Average satisfaction ratings are displayed in Table 69.

Table 69: Satisfaction with the Pedagogical Effectiveness of Requiring E-Mail Use by Discipline.

Q1C3B Satisfaction with the Pedagogical Effectiveness of Requiring Students to Use E-mail

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	191	7.40	2.13	0	10
2 Business	455	7.68	1.99	0	10
3 Education	605	7.59	2.06	0	10
4 Engineering/Computer Science	273	7.47	1.91	1	10
5 Humanities	348	7.50	2.07	0	10
6 Science & Math	419	7.05	2.21	0	10
7 Behavioral/Social Sciences	817	7.14	2.12	0	10
8 Professional/Technical	312	7.13	2.18	0	10
Total	3420	7.36	2.10	0	10

Computer Labs. Over half (58.0%) of the faculty reported teaching classes over the last two years in which some instruction was given in a computer classroom or lab. Faculty reported that instruction was given in a computer classroom or lab in over a quarter (27.5%) of the classes they taught.

The proportion of classes in which some instruction was given in a computer classroom or lab varied by discipline ($p<.01$). This is seen in Table 70a. Engineering and computer science faculty taught more classes utilizing computer classrooms or labs than any other discipline, while humanities and art faculty utilized computer labs for fewer classes than faculty in most or all other disciplines.

Table 70a: Proportion of Classes Taught at Least Partially Using a Computer Lab by Discipline.

Q1C4P Proportion of Classes Taught in Which Any Instruction Was Conducted in a Computer Classroom or Lab

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	407	.2285	.3382	.00	2.00
2 Business	667	.3487	.4065	.00	1.67
3 Education	838	.3028	.3535	.00	1.11
4 Engineering/Computer Science	429	.4490	.4774	.00	7.00
5 Humanities	641	.1486	.2595	.00	1.50
6 Science & Math	944	.3007	.3235	.00	1.00
7 Behavioral/Social Sciences	1427	.2369	.3144	.00	3.00
8 Professional/Technical	457	.2404	.3017	.00	1.00
Total	5810	.2752	.3507	.00	7.00

The proportion of classes taught at least in part in a computer classroom or lab increased from one administration to the next ($p<.01$). This is illustrated in Table 70b, which shows that in 2000 the proportion of classes taught using a computer lab was 0.26, but this increased to 0.29 in 2002.

Table 70b: Proportion of Classes Taught at Least Partially Using a Computer Lab by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C4P Proportion of Classes Taught in Which Any Instruction Was Conducted in a Computer Classroom or Lab	1 2000 AY	3085	.2608	.3303
	2 2002 AY	2725	.2916	.3719

The results indicate that faculty were somewhat satisfied with the technical aspects of providing some instruction in a computer classroom or lab. Faculty gave an average satisfaction rating of 6.56. As Table 71a shows, lecturers were more satisfied with the technical aspects of providing some instruction in a computer classroom or lab than were full professors ($p<.05$) or associate professors ($p<.01$).

Table 71a: Satisfaction with the Technical Aspects of Instructing in a Computer Lab by Rank.

Q1C4A Satisfaction with the Technical Support Aspects of Instructing in a Computer Classroom

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	1721	6.54	2.47	0	10
2 Associate Professor	583	6.32	2.55	0	10
3 Assistant Professor	658	6.60	2.45	0	10
4 Lecturer	319	7.00	2.36	0	10
Total	3281	6.56	2.48	0	10

Discipline was also related to satisfaction with the technical aspects of providing some instruction in a computer classroom or lab ($p<.01$). Table 71b shows that art faculty were less satisfied than faculty in most other disciplines.

Table 71b: Satisfaction with the Technical Aspects of Instructing in a Computer Lab by Discipline.

Q1C4A Satisfaction with the Technical Support Aspects of Instructing in a Computer Classroom

	N	Mean	Std. Deviation	Minimum	Maximum
1 Art	204	5.89	2.79	0	10
2 Business	371	6.65	2.29	0	10
3 Education	491	6.86	2.31	0	10
4 Engineering/Computer Science	340	6.57	2.40	0	10
5 Humanities	252	6.42	2.81	0	10
6 Science & Math	597	6.52	2.35	0	10
7 Behavioral/Social Sciences	765	6.55	2.56	0	10
8 Professional/Technical	263	6.63	2.49	0	10
Total	3283	6.56	2.48	0	10

Satisfaction with the technical aspects of providing some instruction in a computer classroom or lab differed between the first administration and the second ($p<.001$). Table 71c shows that satisfaction increased from 6.38 in 2000 to 6.75 in 2002.

Table 71c: Satisfaction with the Technical Aspects of Instructing in a Computer Lab by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C4A Satisfaction with the Technical Support Aspects of Instructing in a Computer Classroom	1 2000 AY	1708	6.38	2.50
	2 2002 AY	1575	6.75	2.44

Faculty indicated that they were satisfied with the pedagogical effectiveness of providing some instruction in a computer classroom or lab. The average satisfaction rating was 7.57 on the zero-to-ten satisfaction scale. Additionally, as shown in Table 72a, full professors were less satisfied with the pedagogical effectiveness of providing some instruction in a computer classroom or lab than were lecturers or assistant professors.

Table 72a: Satisfaction with the Pedagogical Effectiveness of Instructing in a Computer Lab by Rank.

Q1C4B Satisfaction with the Pedagogical Effectiveness of Instructing in a Computer Classroom

	N	Mean	Std. Deviation	Minimum	Maximum
1 Professor	1723	7.46	1.98	0	10
2 Associate Professor	581	7.56	1.97	0	10
3 Assistant Professor	665	7.74	1.80	0	10
4 Lecturer	321	7.81	1.82	0	10
Total	3290	7.57	1.93	0	10

There was a big bump in the level of satisfaction with the pedagogical effectiveness of providing some instruction in a computer lab from the first to the second administration ($p<.001$). Table 72b shows that the level of satisfaction increased from 7.37 in 2000 to 7.78 in 2002.

Table 72b: Satisfaction with the Pedagogical Effectiveness of Instructing in a Computer Lab by Administration.

	ADMIN SURVEY ADMINISTRATION	N	Mean	Std. Deviation
Q1C4B Satisfaction with the Pedagogical Effectiveness of Instructing in a Computer Classroom	1 2000 AY	1691	7.37	2.02
	2 2002 AY	1601	7.78	1.82

Technical Support

In the 2002 administration, respondents were asked about technical support for requiring students to use the Internet, web, e-mail, or with posting class materials on the web. Most (80.4%) of the faculty reported having technical support available for these purposes.

Those who said that technical support was available were asked if they had used that support. Just over half (53.2%) of the faculty with technical support availability had used this support. The likelihood of using this support depended on academic discipline ($p<.001$). This is revealed in Table 73, which shows that engineering and computer science faculty as well as science and math faculty were less likely to use the technical support available to them.

Table 73: Technical Support Used for Assistance with Requiring Students to Use the Internet, Web, E-mail, or with Posting Class Materials on the Web by Discipline.

			Q1C123B Technical Support Used for Assistance with Requiring Students to Use the Internet, Web, E-mail, or with Posting Class Materials on the Web		
			0 No	1 Yes	Total
DEPCODE3 Department Code	1 Art	Count	51	57	108
		% within DEPCODE3 Department Code	47.2%	52.8%	100.0%
	2 Business	Count	107	135	242
		% within DEPCODE3 Department Code	44.2%	55.8%	100.0%
	3 Education	Count	125	180	305
		% within DEPCODE3 Department Code	41.0%	59.0%	100.0%
	4 Engineering/Computer Science	Count	85	75	160
		% within DEPCODE3 Department Code	53.1%	46.9%	100.0%
	5 Humanities	Count	89	101	190
		% within DEPCODE3 Department Code	46.8%	53.2%	100.0%
	6 Science & Math	Count	151	114	265
		% within DEPCODE3 Department Code	57.0%	43.0%	100.0%
	7 Behavioral/Social Sciences	Count	231	252	483
		% within DEPCODE3 Department Code	47.8%	52.2%	100.0%
	8 Professional/Technical	Count	65	115	180
		% within DEPCODE3 Department Code	36.1%	63.9%	100.0%
Total		Count	904	1029	1933
		% within DEPCODE3 Department Code	46.8%	53.2%	100.0%

Faculty who reported making use of technical support to assist with requiring students to use the Internet, web, e-mail, or with posting class materials on the web rated their satisfaction with the technical support aspects of requiring students to use the Internet, web, e-mail, or with posting class materials on the web. Faculty were fairly satisfied, offering an average rating of 7.39.

SUMMARY

Between February and May of 2002 the SBRI at CSU, San Marcos, conducted a telephone survey of a representative sample of California State University full-time faculty members. This data was combined with similar data collected between October 2000 and February 2001. The purpose of the survey was to provide information about CSU faculty 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.

The results of this survey provide an indication of differences from the first administration to the second in the way CSU faculty use and think about information technology. Changes in use, opinion, and satisfaction will be tracked by comparing the results of these biennial faculty surveys planned through 2006.

In the first two administrations, a total of 6,640 full-time faculty from 21 CSU campuses have been interviewed. The California Maritime Academy and CSU Channel Islands were excluded because the number of faculty on these campuses is too small to provide a sufficient sample. The number of individuals interviewed at each university was proportional to the size of each campus's faculty relative to total number of faculty in the CSU system.

The findings central to this study involve the differences between the first administration of the survey and the second. Overall patterns of technology use and satisfaction across rank and academic discipline are consistent with the previous study. These two issues are given attention in this report

along with overall attitudes, use, and satisfaction. This summary gives focus to general findings and differences between Administrations 1 and 2.

General Findings

The CSU Faculty Technology Survey covers three broad areas: attitudes regarding information technology, its availability and use, and satisfaction with resources and services.

Attitudes

- CSU faculty believe computing and network resources to be very important for the completion of their job tasks and are somewhat satisfied with the computing and technology resources available.
- Efforts to improve computing and network resources have been perceived as somewhat helpful in improving work conditions for many respondents.
- CSU faculty did not rate as very important to provide students any-time, any-place, electronic access to course instruction.
- Faculty did rate as rather important requiring that students be information competent, have unlimited computer access, and have unlimited campus network access.

- CSU faculty regarded it quite important to have a formal policy regarding ownership of web-based and other technology-mediated resources developed by faculty and to assist faculty in integrating technology into instruction.

Access

- Almost all faculty reported that they had access to the computer hardware and software they needed to complete their work.
- Faculty also reported having access to help with installing, maintaining, and upgrading their computer as well as with dealing with other computer problems.

Use

Required Student Use

- Most faculty reported requiring student use of computers and their campus computer network.
- Students were required by most faculty to use word processing software, the Internet, e-mail, and electronic library resources.

Use of Technology and Related Resources

- Use of campus e-mail or access to the Internet was virtually universal among faculty.

- The vast majority of faculty also reported using electronic information resources, assistance from the campus with installation, maintaining, or upgrading their university-provided computer, or some other help with their computer workstation.
- Most CSU faculty also report using their campus online information system and their campus network from off campus.
- A majority of faculty also report participating in computer-based trainings and workshops to improve basic computer skills.

Satisfaction

- Faculty reported being fairly satisfied with the pedagogical effectiveness of requiring students to use the Internet, posting class materials on the web, requiring students to use e-mail, and instructing students in a computer lab.
- Faculty were also generally satisfied with the quantity, quality, and ease of use of electronic information resources available to them.
- Faculty were only somewhat satisfied with online access to get student record information.
- Faculty were fairly satisfied with the working order and capabilities of computing and network equipment, software and telephone equipment that they used, but only somewhat satisfied with video-conferencing equipment.

- Respondents expressed moderate satisfaction with service from their campus with the installation, maintenance, and upgrading of their university-provided computer, and with the training programs in which they participated.

Differences between Administrations 1 and 2

Required Use of Technology

- The number of different types of software applications, technologies, communication tools, and technology-mediated resources that were required of students by faculty increased from Administration 1 to Administration 2.
- The proportion of classes taught in which students were required to use the Internet increased from Administration 1 to Administration 2, as did the proportions of classes in students were required to use e-mail, class materials were posted on the web, instruction was given at least partially in a computer classroom or lab.

Attitudes

- The perceived importance of computers and network resources was higher in Administration 2 than it had been in Administration 1.

- Perceived importance decreased from Administration 1 to Administration 2 for requiring students to be information competent, offering basic computer skills training, providing students with electronic access to course instruction at any time and place.

Satisfaction

- Satisfaction increased from Administration 1 to Administration 2 with computing and technology resources as well as help with installation, maintenance, and upgrading university-provided computer equipment.
- Satisfaction decreased with video-conferencing equipment for those that had used it.
- Satisfaction with the ease of use of electronic information resources increased from 2000 to 2002, but satisfaction with online access to student record information decreased.
- There was an increase in the satisfaction with the pedagogical effectiveness of both requiring use of the Internet and instructing in a computer classroom or lab.
- Additionally, satisfaction with the technical aspects of instructing in a computer classroom or lab increased from Administration 1 to Administration 2.