SURVEY SERIES
Information Technology
Instructional Faculty Responses • 1997, 1999 and 2001

City College of San Francisco

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1. Introduction

In 2001, the Office of Research conducted its biennial technology survey of all personnel in the College to assess use of and progress in acquiring computer skills. This same survey was given in 1997 and in 1999, and a survey of smaller scale in 1994, so there are adequate benchmarks to detect important trends. This report will focus on the response of instructional faculty, referred to throughout the report as “faculty.” A subsequent report will deal with student service faculty, and department chairs as well as classified staff, and administration.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Faculty Respondents</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Respondents</td>
<td>645</td>
<td>476</td>
<td>405</td>
</tr>
</tbody>
</table>

The number of faculty survey participants (Table 1) has declined but remains substantial. The decline in participants may be caused by survey fatigue, but it may also reflect that the surge of interest in computer technology that took place in the mid 90’s has begun to taper off. This report will flag a number of areas where interest and progress appear to have leveled off. The number of participants is still large enough so we can still assume we are measuring roughly the same cohort each year, but we must be cautious in extrapolating these numbers to the faculty as a whole.

The results from this survey clearly show that faculty have made advances and that computer use, e-mail in particular, is a vital part of academic lives and instruction at City College of San Francisco. At the same time, the survey indicates that in a number of areas this progress is not being sustained.

2. Level of Expertise

Faculty assess their skills in use of instructional software at higher levels than in 1997, but there has been no significant increase over the last two years. Interpreting these self evaluations is a bit problematic because no criteria are given for each of the categories, and the target tends to move as more computer possibilities become available. For example, in the mid ‘90s, the web and data bases provided through our library were just beginning to attain the power and strength we recognize now. In the most recent survey in 2001, results suggest that an intermediate user most surely did word processing, likely used spreadsheets, and considered him/herself moderate in use of web skills. It is
unlikely that an intermediate user would be comfortable with presentation software or desktop publishing. It is interesting that in a parallel study of degree applicants at CCSF, students responded with a similar assessment of their skills. It may be that the nature of the question invites responses in the intermediate areas. Another way of confirming that faculty have moved beyond basic computer skills is seen in the Technology Learning Center (TLC) report which states that the TLC has “changed the emphasis in generic workshops from office applications basic skills and Pine E-mail to Web Development/Web e-mail/Graphics/PowerPoint and provided more basics directly to departments” (Technology Learning Center: Summary of Activities, Projects and Support Services 2001/02).

Looking at this survey data and at current TLC offerings, we might infer that the great percentage of faculty now use e-mail and do word processing where earlier we knew that faculty were flocking to workshops to develop these skills.

Table 2
My level of computer expertise is:

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-computer user</td>
<td>6.55%</td>
<td>2.55</td>
<td>2.97</td>
</tr>
<tr>
<td>Beginner</td>
<td>23.09</td>
<td>17.23</td>
<td>17.08</td>
</tr>
<tr>
<td>Intermediate</td>
<td>51.79</td>
<td>57.87</td>
<td>59.16</td>
</tr>
<tr>
<td>Advanced</td>
<td>18.56</td>
<td>22.34</td>
<td>20.79</td>
</tr>
</tbody>
</table>

3. Current Use of Computer Technology

The questions on use of technology (e.g., “which types of software products do you use”) are more definitive than self assessment of expertise (Table 2) because they require less judgment by the respondent. Many of these results are encouraging because they do show an increase of expertise as well of as the more important correlative expansion of instructional use. A few selected areas are highlighted in the next four tables.

These increases can be attributed to both training and increased expertise as well as to general growth of e-mail use in society.
One important marker is that more than half the instructors now put their e-mail addresses on their syllabi.

Table 3
Is your e-mail address on your syllabi?

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20.37%</td>
<td>42.26</td>
<td>55.73</td>
</tr>
<tr>
<td>No</td>
<td>50.25</td>
<td>40.79</td>
<td>30.21</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>29.37</td>
<td>16.95</td>
<td>14.06</td>
</tr>
</tbody>
</table>

E-mail to students has tripled over four years.

Table 4
In the past year have you done any of the following:

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sent e-mail to CCSF students</td>
<td>22.64%</td>
<td>46.22</td>
<td>69.88</td>
</tr>
</tbody>
</table>
Faculty are increasingly utilizing computers for work to the extent that over 95% of respondents use a computer for work at least once a week.

Table 5
How often do you use a computer for work?

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>48.60%</td>
<td>56.87%</td>
<td>64.68%</td>
</tr>
<tr>
<td>A few times each week</td>
<td>26.17%</td>
<td>27.27%</td>
<td>22.89%</td>
</tr>
<tr>
<td>Once a week or less</td>
<td>14.64%</td>
<td>11.84%</td>
<td>8.96%</td>
</tr>
<tr>
<td>Never</td>
<td>10.59%</td>
<td>4.02%</td>
<td>3.48%</td>
</tr>
</tbody>
</table>

Faculty use of web pages as an instructional resource or for course activities shows a dramatic increase over two years, but at 17% still does not show substantial penetration into the faculty as an instructional tool. The combined “Currently Use” and “Would Like to Use” has increased only 5%. City College at 17% use trails the 24.9% national average for use of web pages in public community college courses (Green, Kenneth C. Campus Computing 2002: The 13th National Survey of Computing and Information Technology in American Higher Education. Encino: The Campus Computing Project, 2002).

It might be worthwhile to pursue further the question of why half the College faculty are not showing strong interest in web pages (this is the “not selected” category in Table 6—faculty who neither indicated that they currently use or want to use web pages.) There are also a substantial number—nearly a third—who would like to use web pages but currently do not. With answers to these questions, the institution then might be able to determine if it would be worthwhile to make a college-wide effort to increase the number of faculty who want to and are able to use web pages in an instructional context. One strategy currently under consideration is developing an easily managed web page template for faculty web pages.
Table 6
Instructional resources and course activities:

<table>
<thead>
<tr>
<th>USE A WEB PAGE</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently Use</td>
<td>Not asked</td>
<td>9.87%</td>
<td>17.28%</td>
</tr>
<tr>
<td>Would Like to Use</td>
<td>Not asked</td>
<td>33.61%</td>
<td>30.86%</td>
</tr>
<tr>
<td>--not selected--</td>
<td>Not asked</td>
<td>56.51%</td>
<td>51.85%</td>
</tr>
</tbody>
</table>

4. Desire to Use Computer Technology

The most puzzling responses to the survey came in the questions about whether faculty would like to use various forms of technology in instruction. These numbers often suggest a downward trend or trend which is flat overall as in Table 6 above. Clearly some faculty have moved from a desire to pursue use of a particular technology to actual use, but those aggregates of “Currently Use” and “Would Like to Use” are not increasing. Given choices of use, want to use, and no selection, faculty have increased their percentages of no selection in use of lab assignments and class sections in computer labs (see Appendix: A and B).

At the same time, faculty are finding that institutional barriers are becoming less of a problem in access to instructional classrooms, in technical support, and in access to computer labs (see Appendix: C, D, E). In access to computer labs, the surveys show that from 1997 to 2001, the percentage of faculty finding “Not a Problem” has increased from 30% to 52%.

One must ask where the new “want to use” faculty are for lab based instruction and computer use in classrooms or what has happened to the old “want to use” faculty? The plateau does not appear to be caused by problems of access or lack of support. Are faculty opting out of using technology because of pedagogical reasons or are they finding the upper level computer skills too daunting? These questions should be explored, particularly in those departments which are undertaking curricular change to use labs more fully.

Two areas of computer use have clearly not been embraced by the faculty: (1) the use of listserves; (2) the use of presentation software such as PowerPoint (See Appendix F and G).
In these areas one might assume that the management burdens (particularly for listserves) and disproportionate effort for generally minuscule learning gains (PowerPoint) have chilled enthusiasm.

Some areas offer more encouragement. Use of internet materials and electronic data bases has increased considerably, especially the use of internet materials which has increased over 100% in the four years covered by the surveys (See Appendix H).

Most other areas are stable or show modest increases (See Appendix I).

5. How Faculty Value the Use of Technology

The responses to questions about how technology aids in instruction show that faculty who are using technology do see various individual applications as a value added, and their numbers are increasing. Faculty are increasingly seeing value in access to new resources, creativity presenting material, increased student response, ability to deal with student problems (Appendix J, K, L, M.). A new category in the most recent survey shows that 57% of faculty rate ability to work with disabled students in higher benefit categories (Appendix N).

Despite showing an increasing benefit in technology in a number of areas, faculty show little change in rating overall quality of teaching (Table 7). An additional paradox is that the percentages of faculty who report overall teaching enjoyment (Table 8) as a value of technology declined after the first survey and did not recover, and these percentages are lower than the above areas of value added.
Table 7
What is your best judgment about the way computers and information technology resources have benefited your teaching?

<table>
<thead>
<tr>
<th>OVERALL QUALITY OF MY TEACHING</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-NO BENEFIT</td>
<td>14.65%</td>
<td>11.32</td>
<td>10.65</td>
</tr>
<tr>
<td>2</td>
<td>11.09</td>
<td>14.02</td>
<td>13.91</td>
</tr>
<tr>
<td>3</td>
<td>26.34</td>
<td>28.30</td>
<td>26.92</td>
</tr>
<tr>
<td>4</td>
<td>21.98</td>
<td>21.56</td>
<td>24.26</td>
</tr>
<tr>
<td>5-MAJOR BENEFIT</td>
<td>25.94</td>
<td>24.80</td>
<td>24.26</td>
</tr>
</tbody>
</table>

Table 8

<table>
<thead>
<tr>
<th>ENJOYMENT OF MY TEACHING</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-NO BENEFIT</td>
<td>16.23%</td>
<td>31.62</td>
<td>27.83</td>
</tr>
<tr>
<td>2</td>
<td>8.82</td>
<td>13.68</td>
<td>11.62</td>
</tr>
<tr>
<td>3</td>
<td>21.24</td>
<td>18.52</td>
<td>22.02</td>
</tr>
<tr>
<td>4</td>
<td>21.84</td>
<td>13.39</td>
<td>15.60</td>
</tr>
<tr>
<td>5-MAJOR BENEFIT</td>
<td>31.86</td>
<td>22.79</td>
<td>22.94</td>
</tr>
</tbody>
</table>
6. Professional Development and Support

While it is clear that the great majority of faculty regard their computer abilities as adequate for their jobs, the number who feel their skills only “somewhat” meet job needs has remained steady at around 23%.

Once again we have a moving target because at the same time faculty may have improved skills, the job demands may also have increased. Nevertheless, these figures should be studied with some attention. Is the reason that faculty do not show strong desire to use a web page or web assignments in instruction because of lack of skills? When we see the increases of faculty using e-mail in instruction, it is an easy reach to assume that this increase comes because e-mail is an easily acquired skill. What increases in “use” and “want to use” would come if we could reduce the burdens of the learning curve?

Table 9
How well does your computer expertise match your job needs or requirements?

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely</td>
<td>21.00%</td>
<td>26.12</td>
<td>25.90</td>
</tr>
<tr>
<td>Generally</td>
<td>42.32</td>
<td>44.20</td>
<td>47.95</td>
</tr>
<tr>
<td>Somewhat</td>
<td>23.98</td>
<td>22.99</td>
<td>22.56</td>
</tr>
<tr>
<td>Not at all</td>
<td>5.02</td>
<td>2.90</td>
<td>2.56</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>7.68</td>
<td>3.79</td>
<td>1.03</td>
</tr>
</tbody>
</table>
Percentages of faculty utilizing the help desk still appear rather modest considering the large potential for users (Table 10). More advanced faculty use the help desk in greater percentages than beginners (Table 11).

If beginners and non-users are not calling upon the help desk in large numbers, it could be because of lack of awareness of the service. It will be interesting to look at these numbers again after the roll out of the new computers.

Table 10
How often did you use the CCSF Help Desk this semester?

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Not Asked</td>
<td>71.36%</td>
<td>68.52</td>
</tr>
<tr>
<td>Once</td>
<td>Not Asked</td>
<td>7.83</td>
<td>13.49</td>
</tr>
<tr>
<td>Twice</td>
<td>Not Asked</td>
<td>3.36</td>
<td>8.99</td>
</tr>
<tr>
<td>Three times or more</td>
<td>Not Asked</td>
<td>6.71</td>
<td>8.73</td>
</tr>
<tr>
<td>No response</td>
<td>Not Asked</td>
<td>10.74</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Table 11
Frequency of Help Desk Use by Expertise, 2001

<table>
<thead>
<tr>
<th></th>
<th>Non-computer user</th>
<th>Beginner</th>
<th>Intermediate</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>0.00%</td>
<td>64.22%</td>
<td>71.04%</td>
<td>62.00%</td>
</tr>
<tr>
<td>Once</td>
<td>0.00</td>
<td>10.77%</td>
<td>13.12%</td>
<td>17.07%</td>
</tr>
<tr>
<td>Twice</td>
<td>0.00</td>
<td>6.15%</td>
<td>8.14%</td>
<td>14.63%</td>
</tr>
<tr>
<td>Three times or more</td>
<td>0.00</td>
<td>16.92%</td>
<td>7.69%</td>
<td>6.10%</td>
</tr>
<tr>
<td>No response</td>
<td>0.00</td>
<td>1.54%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
Table 11
How satisfied were you with the assistance you received from the Help Desk?

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not satisfied</td>
<td>Not Asked</td>
<td>2.93%</td>
<td>2.11</td>
</tr>
<tr>
<td>Somewhat satisfied</td>
<td>Not Asked</td>
<td>6.40</td>
<td>9.97</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>Not Asked</td>
<td>16.80</td>
<td>27.49</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not Asked</td>
<td>73.87</td>
<td>60.42</td>
</tr>
</tbody>
</table>

7. Questions
This report has touched only selected highlights of the Technology Survey. For questions or more complete data, contact Steve Levinson (239-3233, slevinso@ccsf.edu) or Pamela Mery (239-3227, pmery@ccsf.edu).
### Appendix

#### A.

**Instructional Resources and Course Activities**

<table>
<thead>
<tr>
<th>COMPUTER LAB ASSIGNMENTS</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently Using</td>
<td>24.34%</td>
<td>25.42</td>
<td>29.63</td>
</tr>
<tr>
<td>Would Like To Use</td>
<td>29.92</td>
<td>24.58</td>
<td>19.01</td>
</tr>
<tr>
<td>--not selected--</td>
<td>45.74</td>
<td>50.00</td>
<td>51.36</td>
</tr>
</tbody>
</table>

#### B.

**Instructional Resources and Course Activities**

<table>
<thead>
<tr>
<th>COMPUTER LAB CLASSES</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently Using</td>
<td>19.69%</td>
<td>26.26</td>
<td>29.63</td>
</tr>
<tr>
<td>Would Like To Use</td>
<td>33.95</td>
<td>24.79</td>
<td>20.00</td>
</tr>
<tr>
<td>--not selected--</td>
<td>46.36</td>
<td>48.95</td>
<td>50.37</td>
</tr>
</tbody>
</table>

*Information Technology Survey*

*Instructional Faculty Respondents from 1997, 1999 and 2001*
C. What kinds of problems or difficulties do you encounter?

<table>
<thead>
<tr>
<th>ACCESS TO INSTRUCTIONAL CLASSROOMS</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-NOT A PROBLEM</td>
<td>29.03%</td>
<td>40.07</td>
<td>42.05</td>
</tr>
<tr>
<td>2</td>
<td>13.65</td>
<td>15.75</td>
<td>15.15</td>
</tr>
<tr>
<td>3</td>
<td>21.34</td>
<td>17.47</td>
<td>18.94</td>
</tr>
<tr>
<td>4</td>
<td>13.90</td>
<td>10.62</td>
<td>10.61</td>
</tr>
<tr>
<td>5-MAJOR PROBLEM</td>
<td>22.08</td>
<td>16.10</td>
<td>13.26</td>
</tr>
</tbody>
</table>

D. What kinds of problems or difficulties do you encounter?

<table>
<thead>
<tr>
<th>INFORMATION TECHNOLOGY SUPPORT STAFF</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>15.94</td>
<td>16.00</td>
<td>16.78</td>
</tr>
<tr>
<td>3</td>
<td>22.27</td>
<td>22.15</td>
<td>19.13</td>
</tr>
<tr>
<td>4</td>
<td>19.43</td>
<td>15.08</td>
<td>14.09</td>
</tr>
<tr>
<td>5-MAJOR PROBLEM</td>
<td>20.96</td>
<td>15.69</td>
<td>11.41</td>
</tr>
</tbody>
</table>
E. What kinds of problems or difficulties do you encounter?

<table>
<thead>
<tr>
<th>ACCESS: STUDENT COMPUTER LAB</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-NOT A PROBLEM</td>
<td>30.40%</td>
<td>39.65</td>
<td>51.72</td>
</tr>
<tr>
<td>2</td>
<td>14.32</td>
<td>18.60</td>
<td>14.94</td>
</tr>
<tr>
<td>3</td>
<td>21.36</td>
<td>18.60</td>
<td>17.24</td>
</tr>
<tr>
<td>4</td>
<td>14.57</td>
<td>8.77</td>
<td>9.20</td>
</tr>
<tr>
<td>5-MAJOR PROBLEM</td>
<td>19.35</td>
<td>14.39</td>
<td>6.90</td>
</tr>
</tbody>
</table>

F. Instructional Resources and Course Activities

<table>
<thead>
<tr>
<th>LISTSERVE TO STUDENTS</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently Use</td>
<td>3.26%</td>
<td>6.72</td>
<td>7.16</td>
</tr>
<tr>
<td>Would Like To Use</td>
<td>22.17</td>
<td>22.90</td>
<td>20.25</td>
</tr>
<tr>
<td>--not selected--</td>
<td>74.57</td>
<td>70.38</td>
<td>72.59</td>
</tr>
</tbody>
</table>
### G. Instructional Resources and Course Activities

<table>
<thead>
<tr>
<th>PRESENTATION SOFTWARE</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Currently Use</strong></td>
<td>13.80%</td>
<td>14.92</td>
<td>15.56</td>
</tr>
<tr>
<td><strong>Would Like To Use</strong></td>
<td>35.04</td>
<td>29.83</td>
<td>31.11</td>
</tr>
<tr>
<td><strong>not selected</strong></td>
<td>51.16</td>
<td>55.25</td>
<td>53.33</td>
</tr>
</tbody>
</table>

### H. Instructional Resources and Course Activities

<table>
<thead>
<tr>
<th>MATERIALS I FOUND VIA THE INTERNET</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Currently Use</strong></td>
<td>23.57%</td>
<td>38.24</td>
<td>50.62</td>
</tr>
<tr>
<td><strong>Would Like To Use</strong></td>
<td>19.84</td>
<td>14.08</td>
<td>10.62</td>
</tr>
<tr>
<td><strong>not selected</strong></td>
<td>56.59</td>
<td>47.69</td>
<td>38.77</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATERIALS I FOUND USING THE CAMPUS LIBRARY’S ELECTRONIC DATABASE(S)</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Currently Use</strong></td>
<td>6.51%</td>
<td>8.82</td>
<td>23.70</td>
</tr>
<tr>
<td><strong>Would Like To Use</strong></td>
<td>19.69</td>
<td>19.75</td>
<td>13.58</td>
</tr>
<tr>
<td><strong>not selected</strong></td>
<td>73.80</td>
<td>71.43</td>
<td>62.72</td>
</tr>
</tbody>
</table>
I.

**Instructional resources and course activities:**

<table>
<thead>
<tr>
<th>2001 Responses</th>
<th>Currently Use</th>
<th>Would Like To Use</th>
<th>--not selected--</th>
</tr>
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<tbody>
<tr>
<td>Overhead Projector</td>
<td>50%</td>
<td>12%</td>
<td>38%</td>
</tr>
<tr>
<td>Self-Paced Software</td>
<td>14</td>
<td>26</td>
<td>60</td>
</tr>
<tr>
<td>Computer Simulations or Courseware</td>
<td>9</td>
<td>23</td>
<td>68</td>
</tr>
<tr>
<td>On-Line Instruction</td>
<td>8</td>
<td>23</td>
<td>69</td>
</tr>
<tr>
<td>Telecourses</td>
<td>3</td>
<td>17</td>
<td>80</td>
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</table>

J.

**What is your best judgment about the way computers and information technology resources have benefited your teaching?**

<table>
<thead>
<tr>
<th>ACCESS TO NEW RESOURCES FOR MY TEACHING</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-NO BENEFIT</td>
<td>15.63%</td>
<td>11.75%</td>
<td>9.55%</td>
</tr>
<tr>
<td>2</td>
<td>12.11%</td>
<td>13.32%</td>
<td>9.83%</td>
</tr>
<tr>
<td>3</td>
<td>24.80%</td>
<td>20.10%</td>
<td>16.85%</td>
</tr>
<tr>
<td>4</td>
<td>18.55%</td>
<td>18.02%</td>
<td>20.51%</td>
</tr>
<tr>
<td>5-MAJOR BENEFIT</td>
<td>28.91%</td>
<td>36.81%</td>
<td>43.26%</td>
</tr>
</tbody>
</table>
K.

What is your best judgment about the way computers and information technology resources have benefited your teaching?

<table>
<thead>
<tr>
<th>CREATIVITY IN PRESENTING MATERIAL TO STUDENTS IN NEW WAYS</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
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</thead>
<tbody>
<tr>
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<td>15.46</td>
<td>15.61</td>
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<td>11.08</td>
<td>13.58</td>
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<tr>
<td>3</td>
<td>22.05</td>
<td>24.74</td>
<td>17.63</td>
</tr>
<tr>
<td>4</td>
<td>18.90</td>
<td>17.01</td>
<td>19.08</td>
</tr>
<tr>
<td>5-MAJOR BENEFIT</td>
<td>27.76</td>
<td>31.70</td>
<td>34.10</td>
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</table>

L.

<table>
<thead>
<tr>
<th>STUDENT RESPONSE TO THE CONTENT OF MY COURSE(S)</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
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<tbody>
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<tr>
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<tr>
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<td>21.84</td>
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<tr>
<td>4</td>
<td>19.75</td>
<td>15.80</td>
<td>18.67</td>
</tr>
<tr>
<td>5-MAJOR BENEFIT</td>
<td>20.79</td>
<td>22.99</td>
<td>26.27</td>
</tr>
</tbody>
</table>
**M.**

<table>
<thead>
<tr>
<th>ABILITY TO HELP STUDENTS EXPERIENCING PROBLEMS WITH COURSE MATERIALS</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-NO BENEFIT</td>
<td>34.50%</td>
<td>32.83</td>
<td>24.62</td>
</tr>
<tr>
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<td>14.16</td>
<td>13.23</td>
</tr>
<tr>
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<td>22.71</td>
<td>23.49</td>
<td>18.77</td>
</tr>
<tr>
<td>4</td>
<td>14.19</td>
<td>15.06</td>
<td>20.00</td>
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<tr>
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<td>23.38</td>
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</tbody>
</table>

**N.**

<table>
<thead>
<tr>
<th>ABILITY TO WORK WITH DISABLED</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
</tr>
</thead>
<tbody>
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<td>Not Asked</td>
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<td>18.10</td>
</tr>
<tr>
<td>4</td>
<td>Not Asked</td>
<td>Not Asked</td>
<td>20.25</td>
</tr>
<tr>
<td>5-MAJOR BENEFIT</td>
<td>Not Asked</td>
<td>Not Asked</td>
<td>36.50</td>
</tr>
</tbody>
</table>