Assessing the Impact of Technology in University Life

2003 Technology Consortium
Wake Forest University
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College Student Experiences Questionnaire (CSEQ)

- The CSEQ, directed by George Kuh of the University of Indiana, was administered to freshmen, sophomores and juniors in 1996, 1997 and 1998 and on the web in spring 2000 and 2002.
- Wake Forest results are compared to norm groups consisting of undergraduate students at Research Universities (RU), Doctoral Universities (DU), Comprehensive Colleges and Universities (CCU), Selective Liberal Arts Colleges (SLA) and General Liberal Arts Colleges (GLA).
Wake Forest Items for 2000 CSEQ with Significantly Higher Mean Scores than 1998 CSEQ

**Time spent:**

- Used e-mail to communicate with instructor/other students
- Searched the WWW or Internet for course material
- Used computer to retrieve material from outside library
- Used computer to produce visual displays
- Used computer to analyze data
- Developed a Web page/multimedia presentation
CSEQ - Quality of Effort: Computer and Information Technology Scale

Sum of Means for Nine Computer Items

- 2000 WF: 25.15
- 1998 WF: 23.29
- RU: 22.73
- DU: 21.87
- CCU: 20.67
- SLA: 21.99
- GLA: 20.73
The HEDS Senior Survey was administered to the Classes of 1993 through 1998 and the Class of 2000 in the spring of their senior year.

The Class of 2000 is the first class to graduate under ubiquitous computing while the senior survey results are compared to the Class of 1998 as well as a College Group and a University Group of peer institutions.
HEDS Senior Survey
Use of Quantitative Tools - Enhancement

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFU 2000</td>
<td>2.94</td>
</tr>
<tr>
<td>WFU 1998</td>
<td>2.72</td>
</tr>
<tr>
<td>College Peer Group 2000</td>
<td>2.66</td>
</tr>
<tr>
<td>University Peer Group 2000</td>
<td>2.76</td>
</tr>
</tbody>
</table>
HEDS Senior Survey
Use of Technology - Enhancement

- WFU 2000: 3.40
- College Peer Group 2000: 2.92
- University Peer Group 2000: 3.02

Mean
Follow-up Senior Essays to Freshman Essays were requested from 25% of the 2001 seniors randomly selected while the College Student Survey (CSS) was administered to the remaining seniors.

One senior wrote, “I expected to become well-educated about modern technology at Wake Forest so that when I applied for internships and when I graduated I would be competitive and able to keep up in the real world. This was met and exceeded.”
2001 CSS - Students Reporting They Were “Very Satisfied” or “Satisfied” with:

- **Availability of internet access**: 95% (Wake Forest University), 83% (Private Universities), 79% (All Four Plus Year Institutions)
- **Computer facilities**: 94% (Wake Forest University), 73% (Private Universities), 69% (All Four Plus Year Institutions)
- **Quality of computer assistance**: 78% (Wake Forest University), 49% (Private Universities), 49% (All Four Plus Year Institutions)
What Is the $64 Question Everybody Asks?

Are Students Learning More as a Result of Ubiquitous Computing?
2001 CSS - To What Degree Did the Use of Technology in Classes Add to Your Learning Experience and Mastery of the Course Material?

- 33% said it added a great deal
- 53% said it added somewhat
- 3% were unsure
- 7% said it added very little
- 4% said it added not at all

WFU Senior Survey Additional Question
The Faculty Survey was developed by the Evaluation Committee to assess the effectiveness of all portions of the Wake Forest strategic plan.

The survey was administered to the undergraduate faculty in 1995, 1998 and 2001.
In-house Faculty Survey Results
Mean Scores Significantly Higher: 2001 vs. 1998 and 1995

- Computers in teaching
- Computers in communication
- Computers in individual instruction
- Computers with information gathering
- Computers for resource material
- Computers for presentations
1998 HERI Faculty Survey

- Administered by UCLA in Fall 1998 and currently to faculty nationally
- Several questions contained items regarding computer use and opinions
- Wake Forest full-time undergraduate faculty results compared by HEDS with peer group of pre-selected nine private institutions
1998 HERI Faculty Survey
Use of Computers

<table>
<thead>
<tr>
<th>Activity</th>
<th>% Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication via e-mail</td>
<td>98/97</td>
</tr>
<tr>
<td>Write memos/letters</td>
<td>91/93</td>
</tr>
<tr>
<td>Conduct scholarly research</td>
<td>71/75</td>
</tr>
<tr>
<td>Work from home</td>
<td>59/62</td>
</tr>
<tr>
<td>Conduct research on internet</td>
<td>48/40</td>
</tr>
<tr>
<td>Create presentations</td>
<td>41/39</td>
</tr>
<tr>
<td>Conduct data analysis</td>
<td>36/31</td>
</tr>
<tr>
<td>Participate in on-line discussion groups</td>
<td>22/12</td>
</tr>
</tbody>
</table>

Percent using computers at least twice a week

- Wake Forest
- Peer Group
1998 HERI Faculty Survey
Sources of Stress

% Faculty

- Research/Publishing demands
- Review/Promotion process
- Personal finances
- Keeping up with info technology
- Teaching load
- Committee work
- Institutional procedures and "red tape"
- Colleagues

Wake Forest
Peer Group

Percent indicating "extensive"
Recent Results

- 2002 CSEQ results similar to 2000 overall
- Less discussion about computers – CSEQ 2002
- 2001 HERI faculty results higher on “placed/collected assignments on Internet” and “computer and machine-aided instruction”
- Sources of stress for “keeping up with information technology” less for 2001 vs. 1998 but more than Peer Group – 2001 HERI
- “Students at more wired schools actually reported more contact with their teachers and more substantive interaction with their peers” – Hu and Kuh [http://olam.ed.asu.edu/epaa/v9n49.html](http://olam.ed.asu.edu/epaa/v9n49.html)
Summary

★ Student and faculty computer usage has increased significantly since the implementation of ubiquitous computing at Wake Forest
★ Student and faculty computer usage at Wake Forest is also higher than peer group institutions while student computing enhancement and satisfaction are higher as well
★ Assessment needs to also include global outcomes such as average GPA, retention and graduation rates
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