



9-1-2000

Wired at Western: Computer Technology at Western Washington University

Gary (Gary Russell) McKinney
Western Washington University

Follow this and additional works at: https://cedar.wwu.edu/surveyresearch_docs

 Part of the [Educational Assessment, Evaluation, and Research Commons](#)

Recommended Citation

McKinney, Gary (Gary Russell), "Wired at Western: Computer Technology at Western Washington University" (2000). *Office of Survey Research*. 443.
https://cedar.wwu.edu/surveyresearch_docs/443

This Report is brought to you for free and open access by the Institutes, Centers, and Offices at Western CEDAR. It has been accepted for inclusion in Office of Survey Research by an authorized administrator of Western CEDAR. For more information, please contact westerncedar@wwu.edu.



Office of Institutional Assessment and Testing • Western Washington University

Volume 5, Issue 4

September, 2000

WIRED AT WESTERN: COMPUTER TECHNOLOGY AT WESTERN WASHINGTON UNIVERSITY

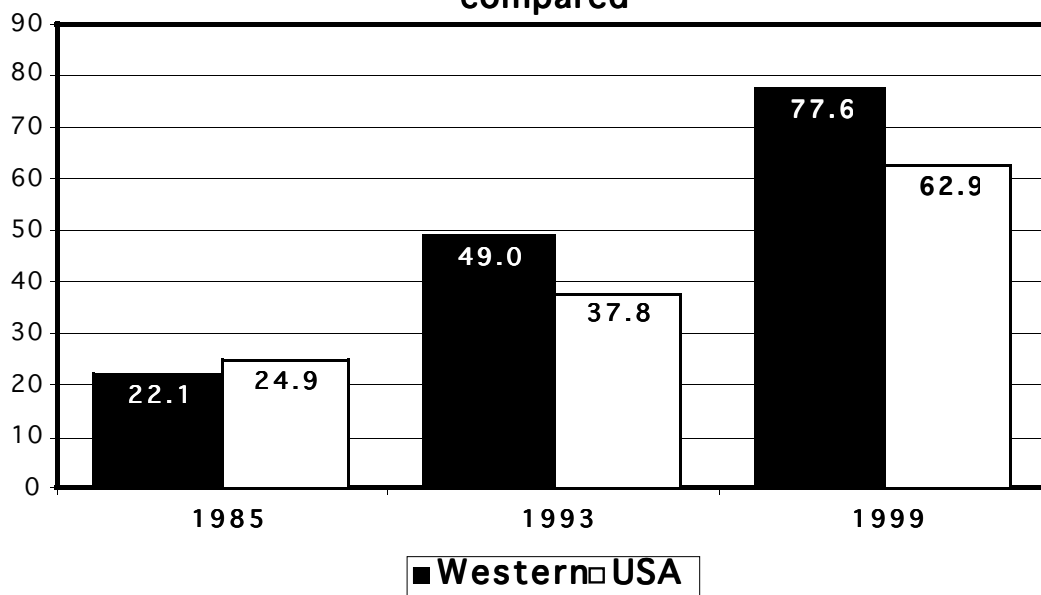
Prepared by Gary R. McKinney

Recently, Western Washington University was recognized as one of the "100 Most Wired Universities." Yahoo Internet Life, along with Peterson's, a provider of education information in print and online, conducted the ratings, based on general resources, access, infrastructure, and administrative and student services. Western was rated particularly high in several categories and was recognized for having: 95 percent of its classrooms wired for high-speed net access, 75 percent of its residence halls outfitted with computer labs, and 11 to 25 megabytes of shared file network space available per student. According to Yahoo, the top universities in the study mark the beginning of a new demand in technology progress and expectation in higher education.

The focus of this report is to ascertain the impact of Western's impressive "wiredness"; to extract some measure of the level of satisfaction with services and facilities; and to examine the extent to which alumni are impacted by computer technologies in the "real world". To accomplish this task, several data sources were conscripted:

- The Cooperative Institutional Research Program (CIRP) surveys of incoming freshmen (administered by the Higher Education Research Institute, or HERI). This survey is administered before students actually begin classes at Western. Findings helped to reveal the degree to which incoming freshmen were familiar with computer technologies prior to exposure to Western's facilities and programs.
- The survey of students enrolled in Freshmen Interest Group (FIGs) courses during fall, 1999. This survey gave some insight into the early influence of Western's wiredness on first-time, incoming freshmen.
- The Higher Education Research Institute's (HERI) survey of Western faculty conducted in the spring of 1999, and The Office of Survey Research (OSR) survey of Western faculty focusing on instructional technology conducted in January, 2000. These findings revealed to what degree Western *faculty* were computer savvy.
- The OSR survey of 1995 Western alumni, conducted in the spring of 1996. These findings gave some insight into the actual "real world" use of computers in the workplace. Although a bit stale, if anything these findings might under represent the importance of computer familiarity in the contemporary workplace.
- The College Student Survey (CSS) surveys of seniors (also administered by HERI). Presented last, these findings revealed the extent to which graduating seniors felt Western's computer facilities and programs met their needs and expectations. (Note: most CIRP and CSS findings in this report were extracted from the recent administrations; however, when edifying, findings from past surveys were also included.)

Figure 1: Percent of in-coming freshmen report frequent use of a personal computer -- three compared

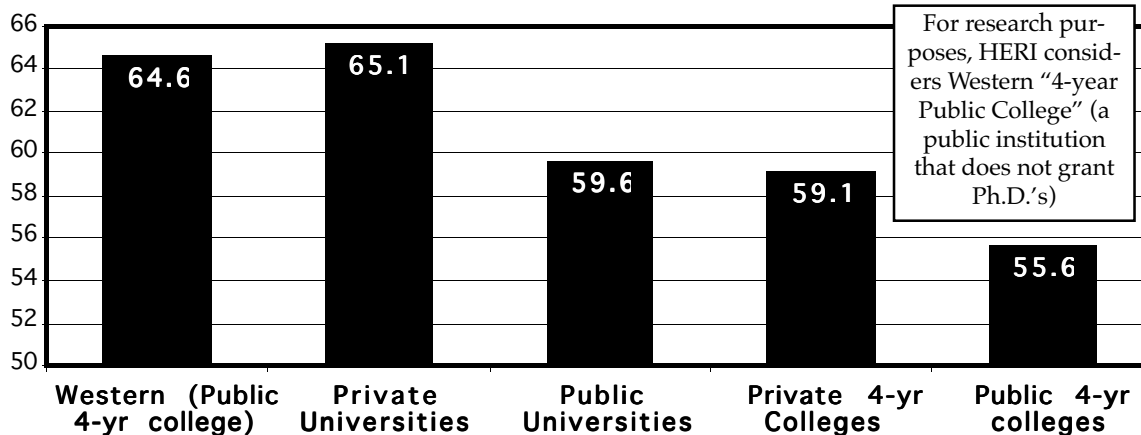


**FROM THE CIRP
SURVEY OF IN-COMING
FRESHMEN**

PREVIOUS TECH QUESTIONS RARE

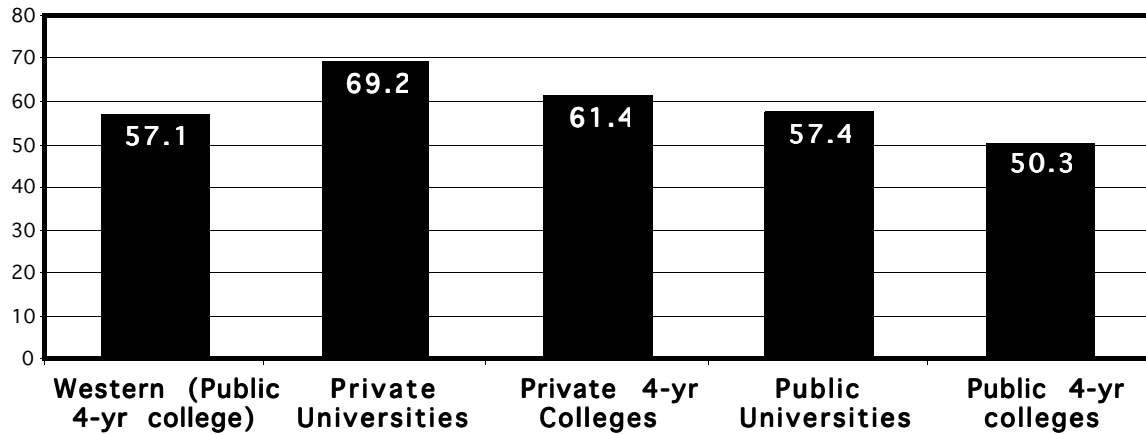
FIRST ASKED IN 1985, THE ONLY COMPUTER-RELATED QUESTION INCLUDED IN THE CIRP SURVEY PRIOR TO 1998 WAS: "HAVE YOU USED A PERSONAL COMPUTER?"

Figure 2: Percent of Fall, 1999, in-coming freshmen frequently used the internet for research or home



SURVEY RESULTS AND COMPUTER TECHNOLOGIES

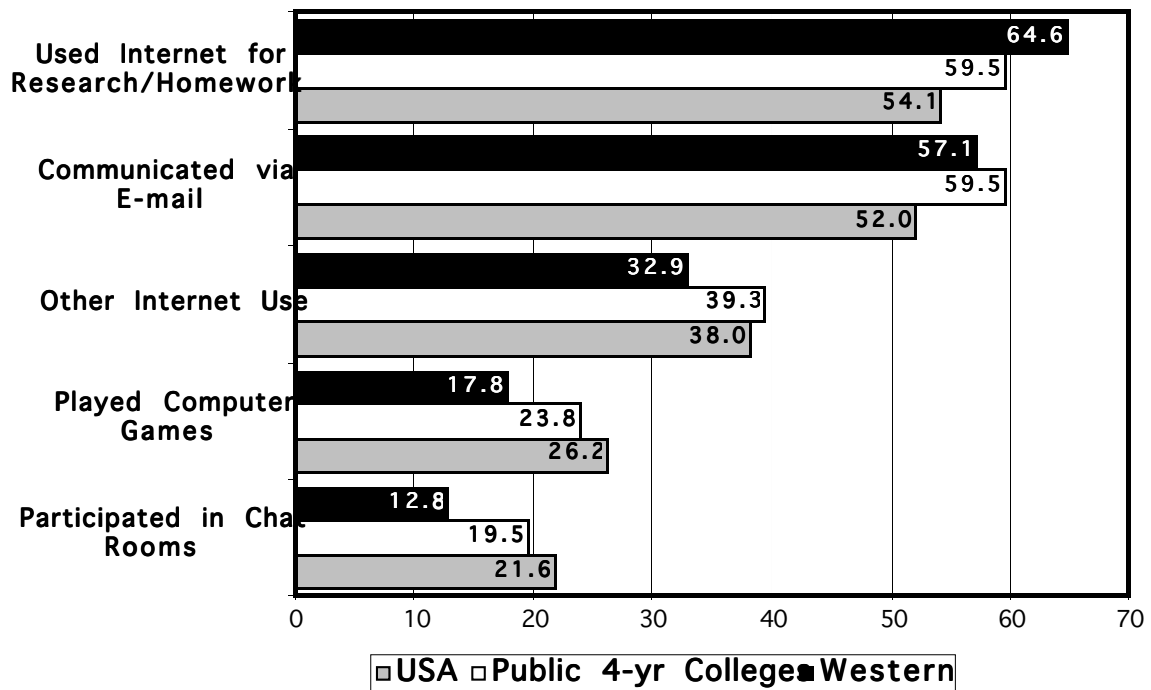
Figure 3: Percent of Fall, 1999, in-coming freshmen repc they frequently communicated via e-mail



PREVIOUS USE OF TECHNOLOGY SPARSE

BETWEEN 1966 AND 1971, LESS THAN A QUARTER OF IN-COMING FRESHMEN (23.3%) HAD EVEN TYPED A HOMEWORK ASSIGNMENT.

Figure 4: Computer use among Fall, 1999, in-coming f



FROM THE FRESHMEN INTEREST GROUP (FIG) SURVEY

The FIGs program consists of two thematically-linked large lecture courses and a small (25 student) 2-credit seminar. The program was piloted in the fall, 1999. The Western FIGs program includes technical support from the Center for Instructional Innovation (CII), which provides FIGs faculty access to and support with computer-based technology instruction.

Table 1: Fall quarter, 1999, Freshmen Interest Group (FIG) surveys

Have you ever used:	At 2-week mark	End of quarter
Web-based syllabus/assignments		
Yes	94.2%	98.2%
No	5.1%	1.8%
Electronic discussion board		
Yes	89.9%	91.0%
No	10.1%	9.0%
On-line surveys		
Yes	85.5%	90.0%
No	14.5%	10.0%
E-mail to instructors or TA's		
Yes	47.1%	67.6%
No	52.9%	32.4%
Power Point		
Yes	25.4%	46.4%
No	73.9%	52.7%
On-line library/research sources		
Yes	71.0%	88.2%
No	28.3%	10.9%
On-line lecture notes		
Yes	93.5%	92.0%
No	5.8%	8.0%
Links to related web sites		
Yes	50.7%	70.5%
No	47.1%	29.5%
Electronic grade checking		
Yes	25.4%	53.6%
No	72.5%	46.4%
On-line study guides		
Yes	76.1%	83.5%
No	20.3%	16.5%

SURVEY RESULTS AND COMPUTER TECHNOLOGIES

Table 2: Instructional Technologies
Used in Last Year (Jan/00 survey)

	PERCENT
Email	82.6
Computer labs	53.7
Web page	52.1
Telephone office hours	39.0
Powerpoint presentations	38.4
Electronic grade book	36.8
Video-taped instruction	31.8
Interactive or real-time TV	7.7
Other technologies, from comments:	34.6
other IT, hardware-centered	17.5
other IT, web-related	14.4
other IT, software-related	9.7

FROM THE
INSTRUCTIONAL
TECHNOLOGY
SURVEY OF
FACULTY

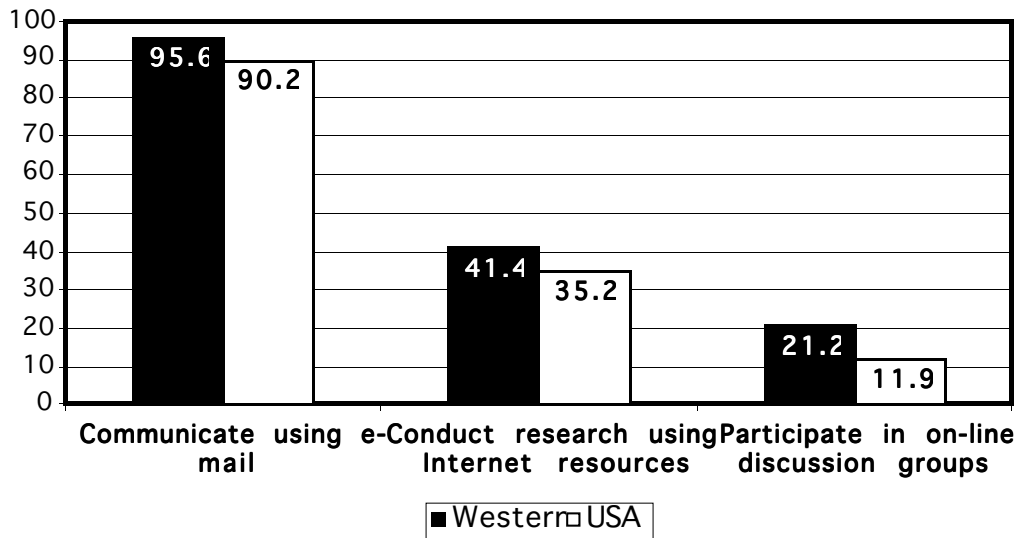
Conducted in January, 2000, the Instructional Technology Survey demonstrated that Western faculty make extensive use of instructional technologies; moreover, faculty appear eager to include even more such technologies in their classes. Website technologies, on the other hand, however popular, raise concerns about the best ways to support faculty in their design, construction, and maintenance, which can be a great deal of work.

Table 3: Constraints on Use of
Instructional Technologies

	PERCENT
Time	71.8
Classroom media	45.7
Skills	45.5
Technical Support	41.6
Office	16.7
Not applicable to course	14.7
Costs	11.6
Lack of interest	3.0
Other constraints, from comments:	15.1

WIRED AT WESTERN, 2000

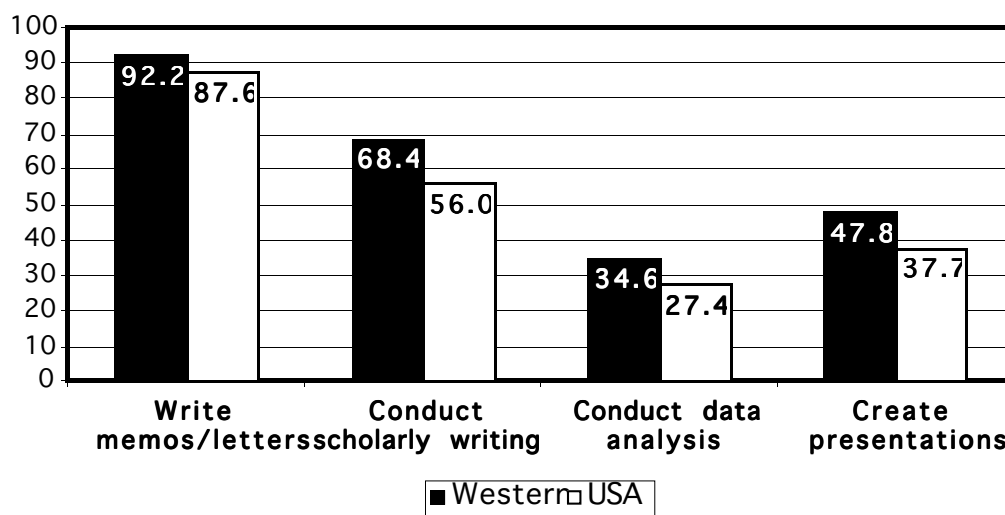
Figure 5: Percent of faculty who used comp technologies at least twice a week (spring,



FROM THE HERI
FACULTY SURVEY

Western participated in the Higher Education Research Institute's 1998-99 survey of faculty. Nationwide, 33,785 full-time college and university faculty from 378 institutions participated.

Figure 6: Percent of faculty who used computer at twice a week for the following purposes (spring,



SURVEY RESULTS AND COMPUTER TECHNOLOGIES

Table 4: Office computer use among 1995 WWU alumni indicating they used a computer at work (hrs/day; surveyed in 1996)

Daily use (hours)	N	%
0-1	214	25.4
1-2	139	16.5
2-3	92	10.9
3-4	82	9.7
4-5	53	6.3
6+	240	31.2
Totals	843	100.0

FROM THE 1996 SURVEY OF 1995 WESTERN ALUMNI

While a modest 39% of 1995 alumni indicated they used a computer at home—1.2 hours daily average—75% indicated they used a computer in the workplace, and on average 3.6 hours a day. There was, however, substantial variation in frequency of use. Of the 75% who used a computer daily at work, 25% used it less than an hour a day, while 31% used it more than six hours a day, or essentially all the time.

For 32% of the large majority of 1995 alumni who daily use a computer in their work,

computer use was an incidental or small part of their work. But for another 42% computer use took up half their day or more.

Of those alums who actually work with computers, 14% felt they were very well prepared, 31% felt they were moderately well prepared, 35% felt they were somewhat well prepared, and 19% felt they were not at all well prepared.

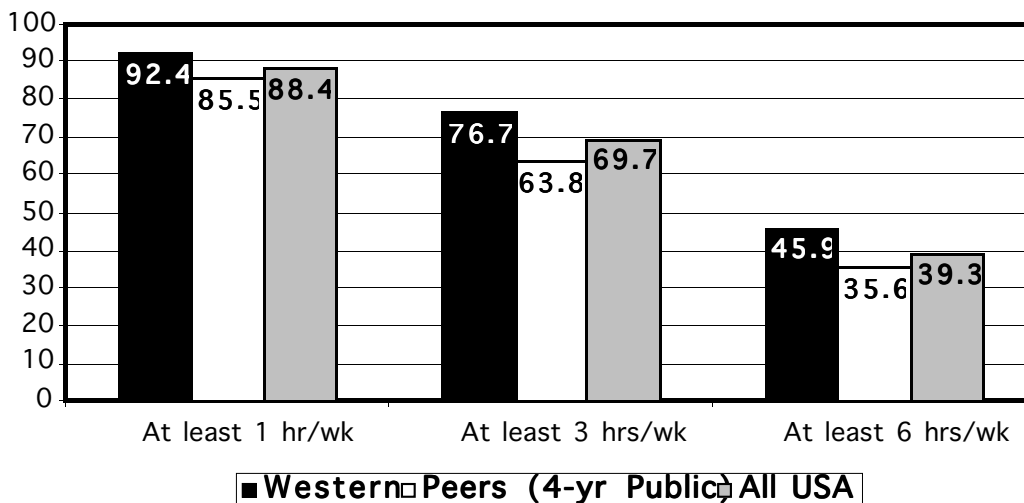
As might be expected, graduates from different majors took jobs with significantly different levels of computer use—although results should be viewed with some caution due to the small sample sizes for some majors. Not surprisingly, computer science majors topped the list with an average of 7.7 hours a day, followed by accounting with 6.0, business with 5.0, journalism with 4.8, management with 4.3, and economics with 4.0. These positions are essentially full-time computer jobs.

A second tier, with relatively heavy computer use, was led by art majors, with an average of 3.9 hours a day, followed by physics (3.75), geography (3.7), visual communications (3.65), and math (3.4).

A third tier, ranging from 2.0 to 2.6 hours a day, constituting moderate use, included geology (2.6), anthropology (2.6), psychology (2.5), sociology (2.3), and biology (2.2). Virtually all other majors indicated some consistent, though lower, level of daily computer use.

WIRED AT WESTERN, 2000

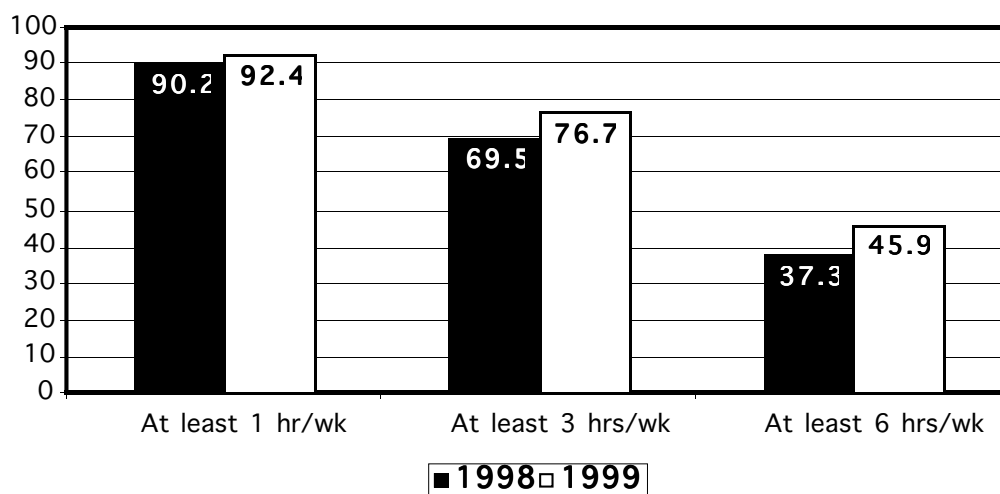
Figure 7: Hours/week spent by seniors/graduates a computer (1999 CSS survey data compared)



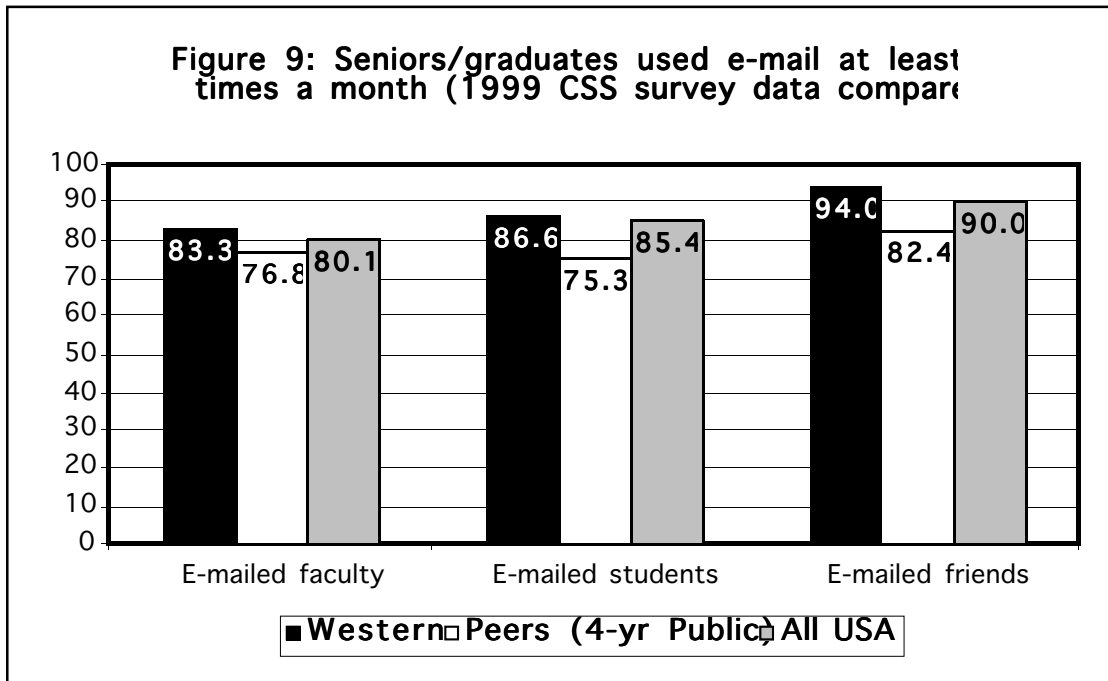
FROM THE CSS SURVEY OF WESTERN SENIORS

Institutions use the CSS slightly differently, although most administer it in the senior year (which Western did from 1993 to 1998), or during the quarter of graduation (which Western now does, starting in 1999).

Figure 8: Hours/week spent using a computer Western graduates (1998 & 1999 CSS survey compared)

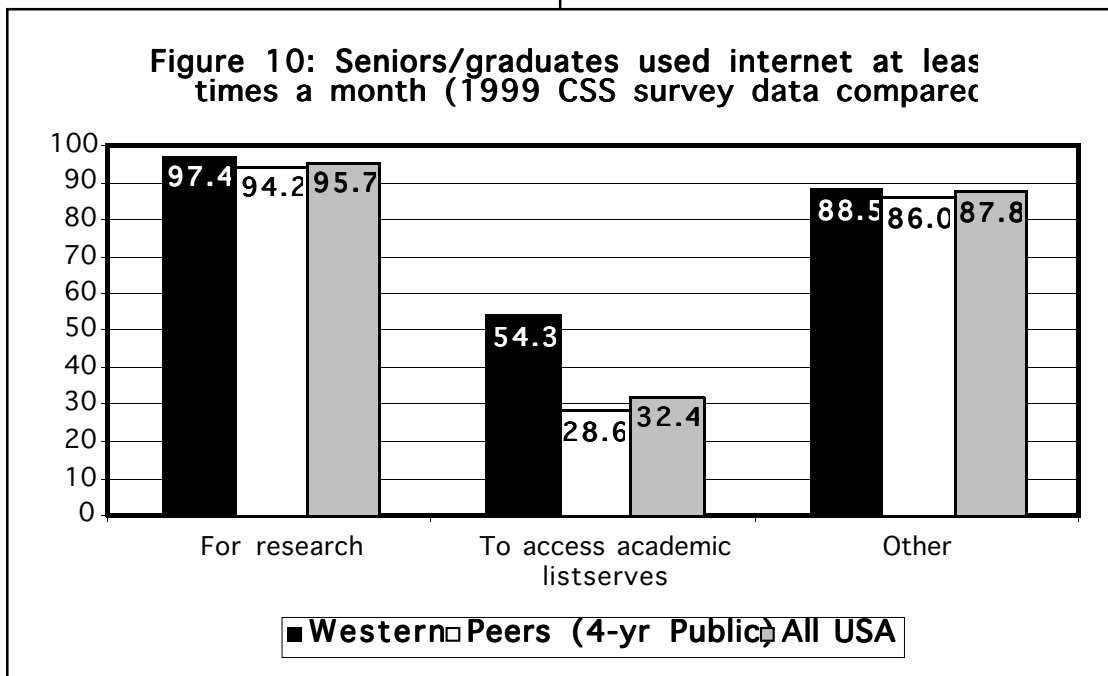


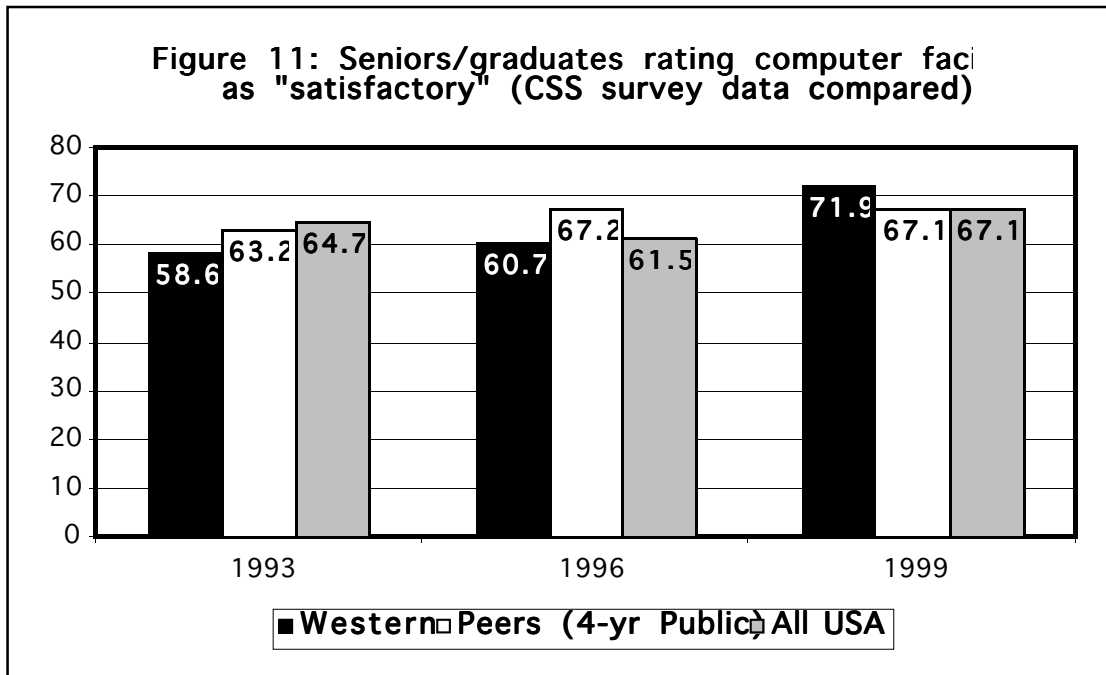
SURVEY RESULTS AND COMPUTER TECHNOLOGIES



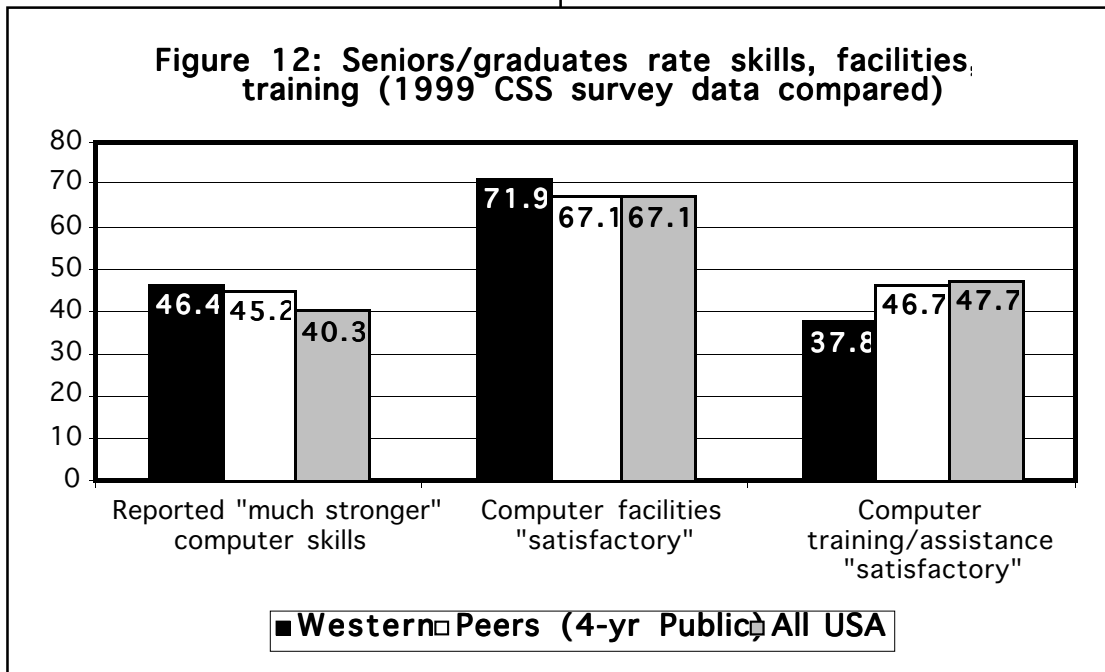
REMINDER: HERI INSTITUTIONAL CATEGORIES

AS IS THE CIRP, THE CSS WAS DEVELOPED AND IS MAINTAINED BY THE HIGHER EDUCATION RESEARCH INSTITUTE (HERI). FOR THEIR RESEARCH PURPOSES WESTERN IS CONSIDERED A 4-YEAR PUBLIC COLLEGE (A PUBLIC INSTITUTION THAT DOES NOT GRANT PH.D.'S).





MORE FROM THE CSS SURVEY OF WESTERN SENIORS



SUMMARY AND CONCLUSIONS

Although conscripted from a half-dozen different surveys, the findings presented in this report seem to indicate that Western not only deserves its “most wired” status, Western students and faculty, for the most part, are ready to take advantage of it. CIRP Survey findings indicate that in-coming freshmen are computer savvy well before arriving at Western; and findings from the FIGs program indicate that given the opportunity, they are ready to dive headlong into the world of computer-based education technologies.

Faculty, too, appear to have begun embracing the new technologies, if they haven't already done so—especially when compared to their peers. Yet faculty do have issues with the technologies. Many, for instance, have yet to find the time, and in many cases the technological assistance, that would allow them to introduce certain technologies—specifically those based on the web—into their course and professional work.

As far as the need for higher education to continue advancing computer-based technologies, alumni data make it clear that such technologies are an important part of the workplace. In fact, given that the alumni findings are from a 1996 survey, it is very likely that this report actually understates their importance. Nevertheless, for the most part, Western alumni seem satisfied with how well Western prepared them for this aspect of their employment. On the other hand, with the rapid advances in computer-based technologies and increasing focus placed on such skills, this is hardly the time to feel complacent.

Indeed, CSS survey findings of last-quarter seniors indicate that while Western students are increasingly satisfied with the school's facilities, they are less happy with the assistance and training in these areas than are students at other institutions—although it should be noted that this finding may be accentuated by the fact that Western *does* have very fine facilities. It may be that because of the excellent hard wiring, users expect more in the area of training and assistance, thus creating a lag. And if such a lag does exist, it would be an expected one. There's very little pre-training in the rapidly-evolving world of computer technologies: new soft- and hardware arrives seemingly overnight. It's not that training is an afterthought, only that it is invariably a reactive rather than proactive process. Complicating the process is that predicting which new technologies users will embrace, and which they will reject, is difficult if not impossible. The issue is, however, important to note. What good are new facilities if users can't get out of them what they seductively promise.

To this end, the university already has plans to build on its commitment to maintain its "wired" status with future improvements that include new Help Desk software and services, enhanced technical support for evenings and weekends, and increased network and Web storage space for each student.



Published by:

OFFICE OF INSTITUTIONAL ASSESSMENT AND TESTING
Dr. Joseph E. Trimble, Director

For copies of Office of Institutional Assessment and Testing (OIAT) technical reports, Focus Research Summaries, InfoFacts, or Dialogue forum discussions, please contact Gary McKinney:
Western Washington University, 516 High Street MS:9010, Bellingham, WA 98225
Phone: (360) 650-3409; FAX: (360) 650-6893; e-mail: garyr@cc.wvu.edu
Web page: <http://www.wvu.edu/~assess>
