THE CAMPUS COMPUTING PROJECT

The 1999 National Survey of Information Technology in US Higher Education

The Continuing Challenge of Instructional Integration and User Support

Assisting faculty efforts "to integrate technology into instruction" remains the single most important information technology (IT) challenge confronting American colleges and universities over the next two to three years, according to new data from The Campus Computing Project. Fully two-fifths (39.2 percent) of the institutions participating in the Project's 1999 survey identify "instructional integration" as their single most significant IT challenge, up from 33.2 percent in 1998 and 29.6 percent in Fall 1997.

"Providing adequate user support" ranks second again this year: just over one-fourth (28.2 percent) of the survey respondents identified user support as the most significant challenge for their institutions, up from 26.5 percent in 1998 and 25.0 percent in 1997. Placing third was "financing the replacement of aging hardware and software," identified by one-seventh of the survey respondents (14.3 percent) as the single most important IT challenge for their college.
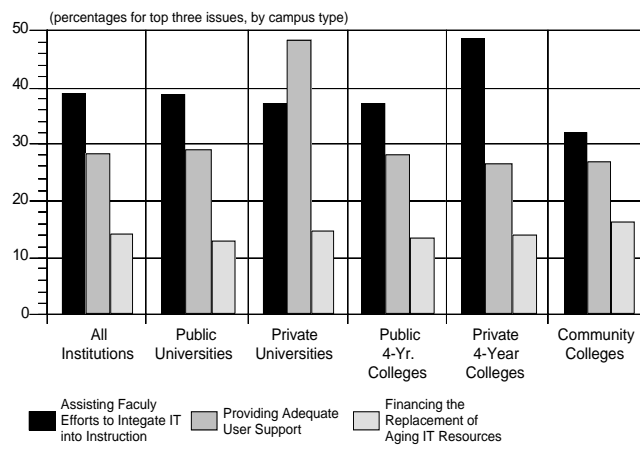
"The survey data document the growing campus awareness that the key IT challenges in higher education involve people, not products," says Kenneth C. Green, founder/director of The Campus Computing Project and a visiting scholar at The Center for Educational Studies of Claremont Graduate University in Claremont, CA. "Two decades after the first desktop comp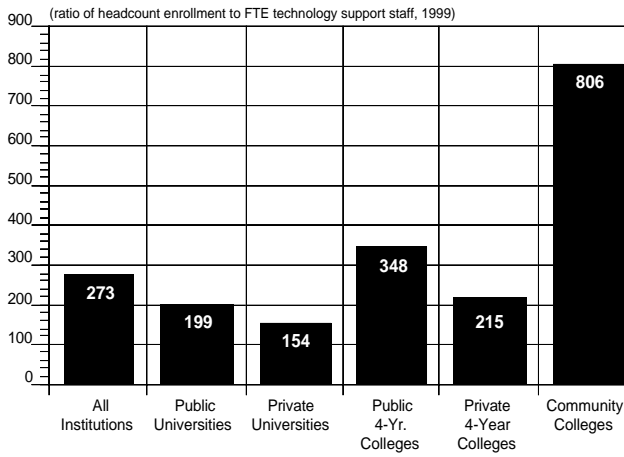uters arrived on college campuses, we have come to recognize that the campus community's major technology challenges involve human factors – assisting students and faculty to make effective use of new technologies in ways that support teaching, learning, instruction and scholarship." Green adds that for many institutions "user support and instructional integration are the flip side of the same coin" – complementary components of the broad challenge that involves the effective use of new technologies in teaching, learning, and scholarship.

Green observes that "despite some dire predictions on both sides of the issue, the real future of technology in higher education is not about a winner-take-all competition between high touch and high tech. Rather, what's ahead for most faculty and most students is some kind of hybrid learning experience in which technology supplements, not supplants, both the con-

Single Most Important IT Issue, Fall 1999

(percentages for top three issues, by campus type)

Categories by campus type: All Institutions, Public Universities, Private Universities, Public 4-Yr. Colleges, Private 4-Year Colleges, Community Colleges

Legend:
- Assisting Faculy Efforts to Integate IT into Instruction
- Providing Adequate User Support
- Financing the Replacement of Aging IT Resources

User Support Ratios, 1999

(ratio of headcount enrollment to FTE technology support staff, 1999)

Campus type	Ratio
All Institutions	273
Public Universities	199
Private Universities	154
Public 4-Yr. Colleges	348
Private 4-Year Colleges	215
Community Colleges	806

tent and the discourse that have been part of the traditional experience of going to college.”

IT Staffing

Staffing concerns compound the challenge of providing adequate user support. The 1999 Campus Computing Survey data reveal that user support levels in two- and four-year colleges and universities are well below those found in organizations and corporations of similar size and technological complexity. For example, the widely accepted user support guidelines promoted by the Gartner Group, an IT industry research organization, generally recommend one IT support person for every 50-75 users. In contrast, the user support ratio at US colleges and universities runs anywhere from some 150 student users to a single IT support person at private research universities to an 800:1 ratio in community colleges.

The user support data highlight another key concern among survey respondents, training and retaining IT staff. These are two critical strategic issues across all sectors of higher education. Both issues receive ratings of 6.2 on a 7 point scale (1=not important; 7=very important). Green reports “colleges find it increasingly difficult to recruit and retain IT staff, in part because campuses may payone-fifth to one-third below the going rate for IT people in business and industry.” He observes that “while the growth of the Internet economy has led some students to think about creating new businesses on the World Wide Web, it has also led many companies – both new and established, both large and small – to raid college campuses for technology talent. Unfortunately, it is a competition too many colleges are losing.”

Preparing for Y2K

Interestingly, Y2K appears as one issue that is not a cause for significant concern among campus IT officials. Less than one percent of the 1999 survey respondents identify Y2K as the “single most important

Y2K Poses Major Problems for My Campus

(percentage who "agree/strongly agree," by campus type)

■ 1998 □ 1999

IT issue confronting their institution,” down from 4.3 percent in 1998. Concurrently, only 9.7 percent “agree/strongly agree” that Y2K issues “pose major problems for my institution,” also down from 30.7 percent in 1998. Even more striking
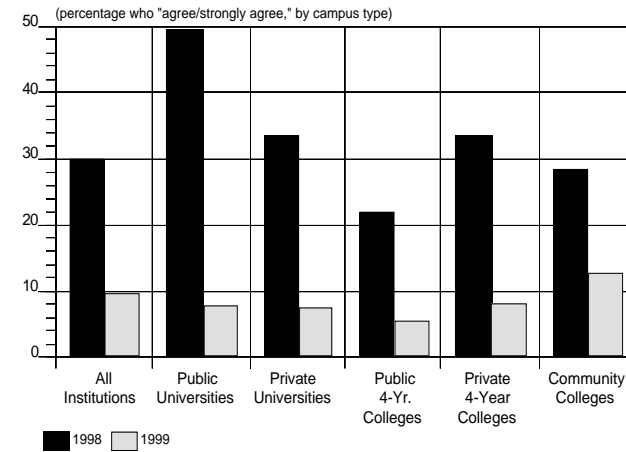
is that just 1.5 percent of the 1999 respondents “strongly agree” about the potential for major Y2K problems at their institutions, down from 4.3 percent in 1998.

Taken together, says Green, “the new survey data suggest that campus IT officials have used the past year to address Y2K concerns. Moreover, the data imply that the campus IT officials also have reasonable confidence in the Y2K compliance claims of their key software providers.”

More IT in the Curriculum

Not surprisingly, the 1999 survey data reveal that more college courses are using more technology resources. Over half (54.0 percent) of all college courses make use of electronic mail, up from 44.0 percent in 1998 and 20.1 percent in 1995. Similarly, the percentage of college courses using Web resources in the syllabus rose from 10.9 in 1995 and 33.1 percent in 1998 to 38.9 percent in 1999. More than one-fourth of all college courses

(28.1 percent) have a Web page, compared to 22.5 percent in 1998 and 9.2 percent in 1996. Concurrently, the 1999 Campus Computing Survey data reveal that about one-fifth of college faculty (19 percent) maintain a personal Web page, one not linked to any specific class or course.

Services on the Web

This year's survey also reveals that more institutions are providing more services via the World Wide Web: more than two-thirds (69.5 percent) of the institutions in the 1999 survey provide online undergraduate applications on their Web sites, up from 55.4 percent in 1998. Three-fourths (77.3 percent) make the course catalog available online, compared to 65.2 percent last year. Library-based course reserves readings are available on the Web at one-fourth of the institutions, up from 17.9 percent in 1998. And almost half (46.5 percent) of the participants in the 1999 Campus Computing Survey report that their institution currently offers one or more full college courses online via the Internet and the World Wide Web.

Electronic Commerce

However, one Web-based service that appears late arriving in higher education is electronic commerce: only 7.6 percent of the institutions participating in the 1999 Campus Computing Survey report e-commerce capacity via their campus Web sites, up slightly from 5.1 percent in 1998. Concurrently, only 3.9 percent of colleges and universities report that they have a strategic plan for electronic commerce.

"Growing numbers of students, faculty, and consumers now routinely

purchase books, music, clothing, and other goods and services via the Internet. Yet the 1999 survey data confirm that compared to other sectors of the economy, colleges have been slow to develop a capacity for electronic commerce," states Green. "At

Using Technology in the Classroom
Rising Use of Technology in Instruction
(percentage of courses using IT resources)

the end of the day, e-commerce in higher education involves more than permitting prospective students to pay application fees or assisting alumni to

Services on the Campus Web Site
(percentages, by campus type)

order logo attire on the campus Web sites. Rather, e-commerce involves a wide range of content, product, and service issues that ultimately benefit all who participate as members of the higher education community."
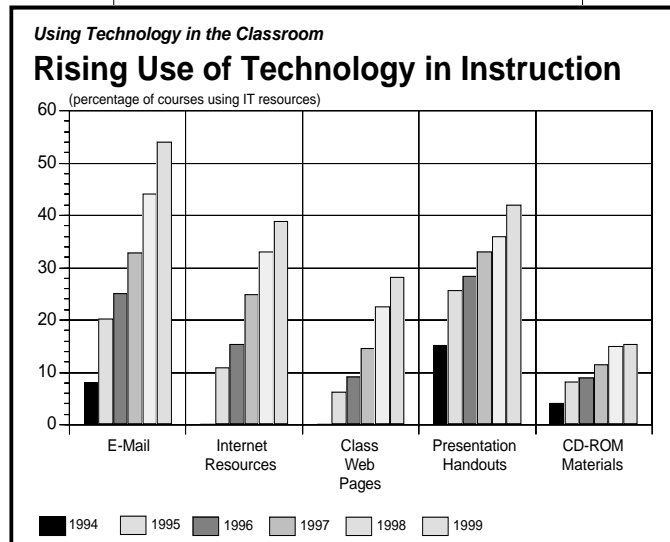
IT Planning

The 1999 Campus Computing Survey data suggest that more campuses are coming to terms with strategic and financial challenges presented by information technology. Fully three-fifths of all institutions (61.3 percent have a strategic plan for information technology, an impressive gain from the 50 percent reporting such plans in 1998. Concurrently 44.3 percent of colleges and universities now report an "acquire and retire plan" for computers and other technology products, up from 37.3 percent in 1998 and just 15.9 percent in 1990.

Green notes that "over the past decade many colleges have struggled with developing strategic and financial plans for IT. Certainly most institutions and departments are still very dependent on *budget dust*—year end money —for a significant portion of their IT spending. Nonetheless, things are getting better as both campus officials and others off-campus recognize the importance of developing viable strategic and financial plans for information technology."
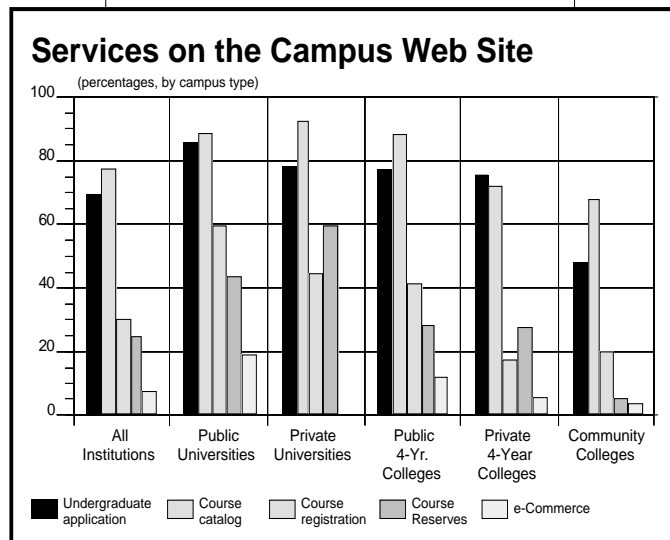
Recognition and Reward

Most campuses have IT development programs (75.8 percent) and campus support centers (65.9 percent) to assist faculty in bringing technology resources into their courses. However, just one-seventh (13.7 percent) of colleges and universities have a formal, institutional program to recognize and reward the use of information technology as part of the faculty review process. The 1999 data show little change on these measures over the past few years.

"Campuses continue to send mixed messages about faculty investments in information technology," reports Green. "Recognition and reward remain essential yet widely ignored components of technology planning at most institutions: investing in technology may put you at professional risk when departments review faculty portfolios.

Green adds that "failing to recognize and promote faculty who invest in technology in their scholarly and instructional activities sends a chilling message about the real departmental and institutional commitment to the integration of technology in instruction and scholarship."

Begun in 1990, the annual Campus Computing Project is the largest continuing study of information technology in American higher education. The 1999 survey data were provided by campus officials, typically the senior technology officer, at 557 two- and four-year public and private colleges and universities across the United States. Survey participants completed the questionnaire during the summer and fall of 1999.
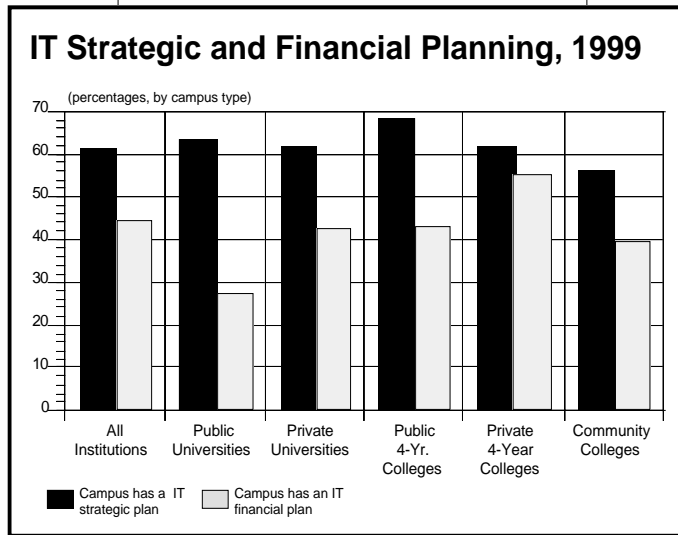
Copies of the 1999 survey will be available on December 15th. Price: $35, postpaid to US addresses. Please see coupon below.

IT Strategic and Financial Planning, 1999

(percentages, by campus type)

Bar chart comparing "Campus has a IT strategic plan" (black) and "Campus has an IT financial plan" (light gray) by campus type: All Institutions, Public Universities, Private Universities, Public 4-Yr. Colleges, Private 4-Year Colleges, Community Colleges.

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