2008

CAMPUS COMPUTING

The 19th National Survey of Computing and
Information Technology in American Higher Education

Kenneth C. Green

THE CAMPUS
COMPUTING PROJECT

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Begun in 1990, the Campus Computing Project is the largest continuing study of the role of computing and information technology in American higher education.

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The 19th National Survey of Computing and Information Technology in American Higher Education

The Campus Computing Survey, now in its 19th year, is the largest continuing study of the role of computing and information technology in American higher education. The 2008 Campus Computing Survey was conducted during September and October, 2008.[1] The survey results presented here summarize data provided by 527 two- and four-year public and private colleges and universities across the United States.[2]

From its inception in 1990, the annual Campus Computing Survey has served as an IT benchmarking study and has focused primarily on academic computing, i.e., the use of computing and information technology resources to support and enhance instruction and scholarship. However, over the past decade the organizational boundaries and the technology resources and services that once separated academic and administrative computing have become increasingly porous. Consequently, the annual Campus Computing questionnaire now includes a number of survey items that address administrative/ERP (Enterprise Resource Planning) issues and related campus IT resources and services.

Who participates in the annual Campus Computing survey? The survey respondents are typically the senior academic computing or information technology officers at their institutions: these campus officials are specifically responsible for and knowledgeable about the current direction of technology planning, policy, finances, and IT implementation, as well as eLearning activities, initiatives, and priorities for their institutions. The titles of the survey respondents include chief information officer (CIO), chief technology officer (CTO), vice-president/vice-provost for information technology information services, executive director for information technology, executive director for academic computing, or other similar job title.

As noted above, the 2008 survey data were collected during September and October 2008. An electronic mail invitation with a hotlink to the online questionnaire was sent to prospective survey participants, typically the CIO or senior campus IT officer, at some 1200 two- and four-year public and private colleges and universities across the United States. Where it was not possible to identify a specific individual with a senior IT title, the questionnaire was sent to the senior academic officer. A total of 527 surveys were completed by early October, 2008. (Additional information about the survey methodology is provided in Appendix A; a list of institutions participating in the 2008 survey appears in Appendix B.)

Top IT Priorities and Concerns

For the fifth consecutive year, campus IT officials participating in the annual Campus Computing Survey report that "upgrading/enhancing network and data security" is the "single most important IT" issue confronting their institutions over the next two-three years. This year one-fifth (21.3 percent) of the survey respondents identified network and data security as their top IT concern, down slightly from one-fourth (25.5 percent) in 2007 and a one-third decline from the 29.5 percent identifying IT security as the top issue in 2006.

2000	2001	2002	2003	2004	2005	2006	2007	2008
Instructional Integration (40.5%)	Instructional Integration (31.5%)	Instructional Integration (24.3%)	Instructional Integration (21.4%)	Network & Data Security (21.1%)	Network & Data Security (30.0%)	Network & Data Security (29.5%)	Network & Data Security (25.5%)	Network & Data Security (20.3%)
User Support (22.3%)	User Support (15.4%)	Upgrade/ Replace ERP (18.9%)	Upgrade/ Replace ERP (17.6%)	Instructional Integration (18.5%)	Instructional Integration (17.9%)	Instructional Integration (17.3%)	Upgrade/ Replace ERP (13.0%)	Hiring/ Retaining IT Staff (16.7%)
Financing IT (14.6%)	Upgrade/ Replace ERP (12.6%)	Financing IT (15.1%)	Financing IT (16.1%)	Upgrade/ Replace ERP (17.2%)	Upgrade/ Replace ERP (16.1%)	Upgrade/ Replace ERP (16.3%)	Hiring/ Retaining IT Staff (12.3%)	Instructional Integration (11.9%)

Figure 1: The Single Most Important IT Issue Confronting My Institution Over the Next Two-Three Years (trends, 2000-2008)

The priority that senior campus IT officials assign to IT and network security over the past five surveys marks a major shift from the emphasis on "the instructional integration of information technology" in the first years of the decade (Figure 1). Additionally, the 2008 survey data highlight the close clustering of the top IT issues: the top three IT priorities in the 2000 survey accounted for more than three-fourths (77.4 percent) of the institutional responses,

compared less than half (48.9 percent) of the responses in 2008. In other words, the closer clustering of the top three priority items in the more recent surveys indicate that there is no one clearly dominant IT issue as there was in 2000. That more issues compete for the attention of campus IT officials also means that these issues also compete for IT funding.

The 2008 survey data also document a renewed concern among senior campus IT officials about "hiring and retaining" IT staff, reflecting the increased competition for IT talent across all sectors of the economy. The concern about "hiring/retaining" IT staff (16.4 percent in 2008, up from 12.3 percent in 2007) is now higher than the levels posted during the dot.com era – 11.0 percent in 2001, compared to 3.7 percent in 2004, following the dot.com downturn. Although the competition for IT talent may lighten somewhat because of the current economic downturn, public institutions in particular may remain at competitive disadvantage for hiring and retaining IT talent because salaries and benefits may not be on-par with off-campus opportunities.

All Institutions	Public Universities	Private Universities	Public 4-Yr Colleges	Private 4-Yr Colleges	Comm. Colleges
Network & Data Security (20.3%)	Hiring/ Retaining IT Staff (29.3%)	Network & Data Security (29.9%)	Network/ & Data Security (21.7%)	Network & Data Security (19.8%)	Network & Data Security (21.3%)
Hiring/ Retaining IT Staff (16.7%)	Upgrade/ Replace ERP (17.3%)	Upgrade/ Replace ERP (15.9%)	Hiring/ Retaining IT Staff (17.0%)	Hiring/ Retaining IT Staff and Instructional Integration (tie: 13.0%)	Hiring/ Retaining IT Staff (16.4%)
Instructional Integration (11.9%)	Instructional Integration (13.3%)	Instructional Integration (13.6%)	Distance Ed/ User Support/ Instruction (tie: 10.4%)		User Support (11.4%)

Figure 2: The Single Most Important IT Issue Confronting My Institution Over the Next Two-Three Years (percentages by sector, 2008)

While the numbers vary somewhat by type of institution, "upgrading network and data security" is also the top issue across all sectors of higher education in 2008, save for public research universities (Figure 2). Moreover, the concern about hiring in public universities jumped from third place (at 18.0 percent in 2007), first place at (29.3 percent in 2008, up about a third). Network and data security, ranked second in public universities in 2007 (20.5 percent) fell to while to fifth in 2007 (at 10.7 percent), while ERP upgrade/replacement (the top issue for public university CIOs in 2007) fell slightly from 21.8 percent in 2007 to second place (17.3 percent) in 2008.

This year's survey also shows some interesting variations across sectors on the other issues that campus IT officials identify as top priorities. As in 2007, across most sectors the second and third ranked issues are either

"upgrade/replace ERP" systems or "hiring/retaining IT staff." Moreover the second and third ranked items are closely clustered in most sectors, often separated by no more than five percentage points. Also, instructional integration – the top-ranked IT issue in the early part of the decade that dropped dramatically in recent years – now appears among the top three IT priorities in four of five sectors: public and private universities and four-year colleges, compared to appearing in just one sector (private four-year colleges) in 2007.

What accounts for the declining priority for network and data security? Without question, campuses have made significant investments in these areas in recent years. So at one level, the "declining priority" of network and data security may be no surprise: the recent investments in network and data security are paying off. Too, as noted above, the clustering of IT priorities means more competition for the attention of IT leaders and competition for IT budget dollars by issues that include hiring, emergency notification, and the instructional integration of information technology.

IT Security and Crisis Management

Even as upgrading network and data security have become a "declining" (if still high) priority for campus IT officials, the 2008 survey provides ample evidence that IT security presents continuing challenges colleges and universities.

In the context of strategic planning, almost three-fourths (72.0 percent) of the colleges and universities participating in the 2008 Campus Computing Survey report a strategic plan for IT security, about the same as in 2007, but up from 53.5 percent in 2002. However here as elsewhere the data reveal important variations across sectors: as shown in Figure 3, universities are far more likely to have strategic plans for IT security than four-year colleges and community colleges. Moreover, a fair number of institutions across all sectors report no plan – ranging from 12.3 percent in private universities (down from 46.5 percent in 2002), to 21.9 percent in community colleges (compared to 42.7 percent in 2002). Additionally, as shown in Figure 4, some sectors have shown only small increases in the percentage of institutions reporting a strategic plan for network security between 2002 and 2008.

Related to IT security, just three-fifths (60.6 percent) of the institutions participating in the 2008 survey report a strategic plan for IT disaster recovery, up slightly from 2007 (59.1 percent) and reflecting only modest gains from 2004 (55.5 percent) or even 2002 (53.0 percent; Figure 4). As above, some sectors have shown only small increases in the percentage of institutions reporting a strategic plan for IT disaster planning between 2002 and 2008.

The good news in the 2008 survey regarding IT security issues is that several metrics reveal gains since 2005. The percentage of campuses reporting hacks or attacks on campus

networks in 2008 was 46.2 percent, about the same as last year (45.6 percent) but down from 51.1 percent in 2005. Fewer campuses report major problems with computer viruses (11.4 percent, compared to 35.4 percent in 2005) and spyware (13.1 percent, compared to 40.8 percent in three years ago; see Figure 5).
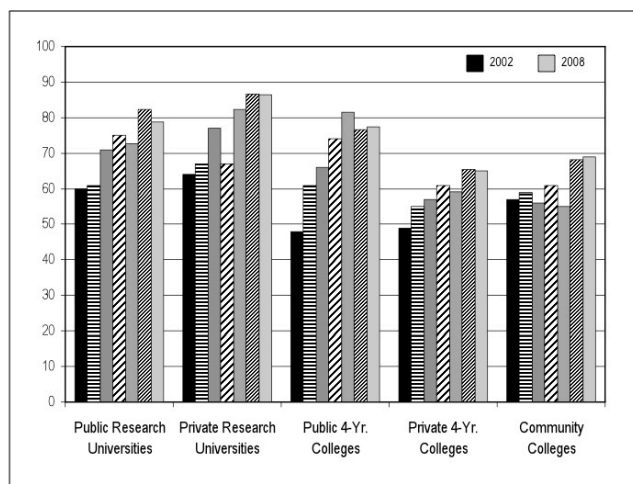
Figure 3: Strategic Plan for Network Security (percentages by sector, 2002-2008)
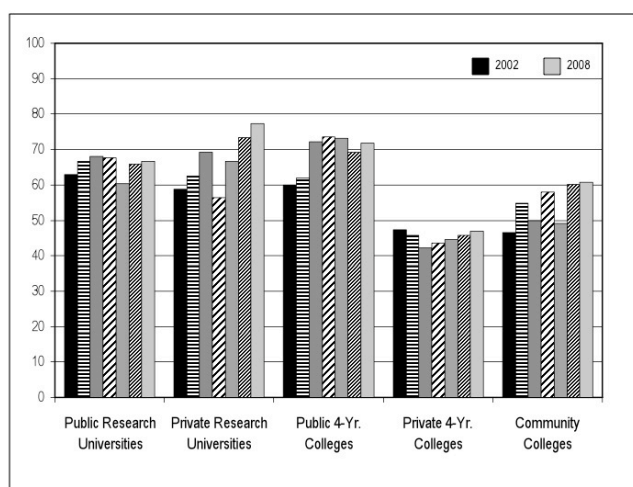
Figure 4: Strategic Plan for IT Disaster Recovery (percentages by sector, 2002-2008)

But the number of institutions reporting stolen computers with sensitive data is rising, up to more than a fifth of campuses in 2008, (22.2 percent), compared to 17.1 percent in 2007, 13.5 percent in 2006 and 15.3 percent in 2005). And although the numbers are generally low (under 15 percent), more campuses report student security incidents linked to social networking sites such as Facebook or MySpace (12.9 percent in 2008, about the same as in 2007 but up from 9.8 percent in 2006).

The good news is also offset by increases in percentage of institutions reporting a security incident involving identity management, (25.6 percent, compared to approximately 20

percent in the preceding four years) and a data breach on a distributed server not under the control of central IT services (16.9 percent compared to 14.6 in 2007 and 11.3 in 2006). Additionally, more campuses experienced an IT security problem involving employee misconduct this past year (8.9 percent in 2008, up from 6.5 percent 2007).
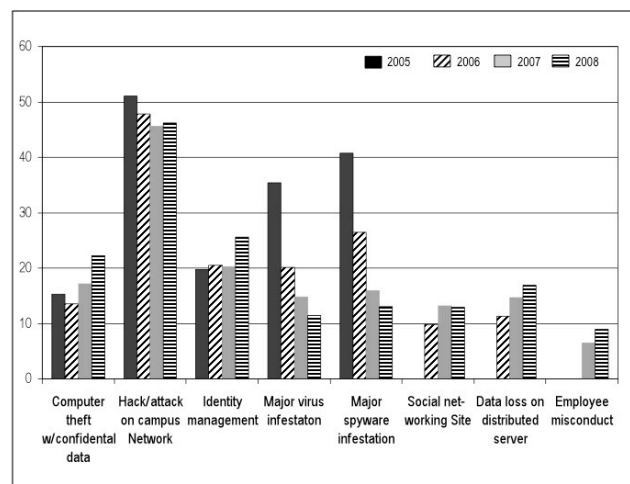
Figure 5: IT Security Incidents (percentages, 2005-2008)

Not surprisingly, public and private research universities were, in general, more likely to report IT security incidents than other sectors; these institutions are larger targets for many kinds of incidents (e.g., attacks on the network; employee misconduct) and also often have more distributed IT decision-making that can contribute to other problems. More than two-fifths of public and private research universities reported the theft of a computer with confidential data in A/Y 2008, compared to less than a fifth of public and
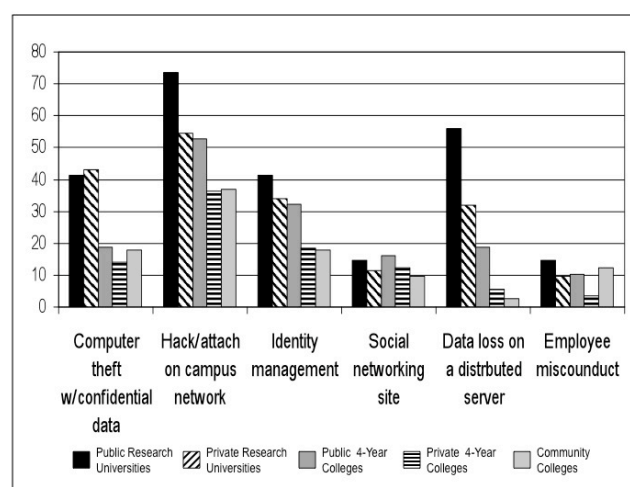
Figure 6: IT Security Incidents (percentage of institutions reporting an IT security incident, by type and sector, 2008)

private four-year institutions and community colleges. And as shown in Figure 6, universities were, in general, more

likely to experience other kinds of IT security incidents and problems than campuses in other sectors.

In sum, the 2008 survey data confirm the continuing security and crisis management challenges confronting campus IT officials across all sectors of American higher education. Three years after Hurricanes Katrina and Rita and seven years after the 9-11 attacks, it is still surprising that so many colleges and universities – approximately 40 percent – have yet to complete IT disaster plans, while an unknown number have yet to update these plans in recent years. Similarly, more than a fourth of the institutions participating in the 2008 survey do not have a strategic plan for IT security, and as above, no doubt many others have not updated their IT security plans in recent years.

Emergency Notification

In the wake of the tragic events at Virginia Tech in spring 2007, many campuses expanded the role of IT security to include campus security. As part of this expanded definition, colleges and universities moved quickly to enhance and exploit IT communication and notification services and resources as part of a larger campus crisis management plan.

As of fall 2008, more than two-thirds (70.8 percent) of the institutions participating in the annual Campus Computing Survey had a strategic plan for emergency communication or notification services, up from 44.0 percent in 2007 (Figure 7). Concurrently, 94.5 percent of institutions report an "operational emergency notification system,"
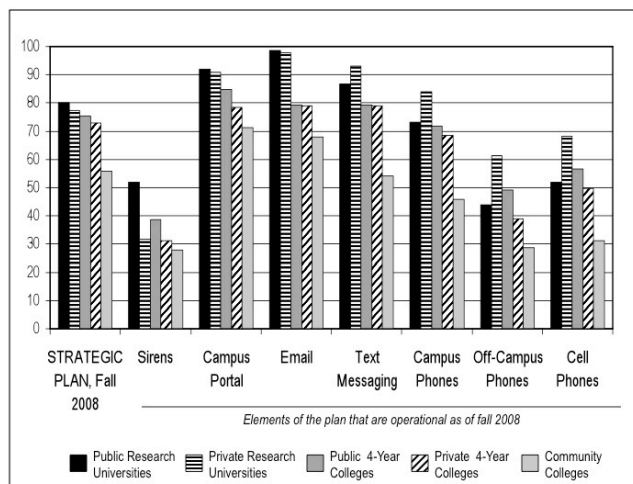
Figure 7: Emergency Notification Plans and Resources (percentages by sector, 2008)

compared to 75.0 percent last year. However, as elsewhere with the survey data, aggregated numbers mask important differences across sectors. For example, more than an eighth (13.1 percent) of community colleges do not have an operational emergency notification plan, compared to

5.1 percent for private four-year colleges, and less than three percent for public four-year colleges and for public and private universities.

The operational elements of campus notifications plans showed major gains between 2007 and 2008. For example, the proportion of campuses reporting sirens as part of these plans jumped from 23.4 percent in 2007 to 34.8 percent this year. Similarly, the percentage of institutions reporting emergency notification capacity utilizing email grew by almost a third, from 66.4 percent in 2007 to 86.2 percent in 2008, while voice mail to campus phones increased by almost half to 65.5 percent, up from 44.6 percent in 2007; text messaging rose by three-fourths, from 43.3 percent in 2007 to 75.6 percent in 2008. Additionally, the percentage of campuses reporting voice mail notification to off-campus phones and to cell phones more than doubled from 2007 to 2008, from 18.0 to 41.1 percent for "wired" phones (land-lines) and from 22.5 to 48.5 percent for mobile phones. Finally, the proportion of campuses reporting capacity to send text messages and reach mobile phones also jumped dramatically, from 43.3 percent in 2007 to 75.6 percent in 2008. Finally, four-fifths (81.2 percent) of institutions can now post emergency messages on campus web sites or portals, up from almost two-thirds (62.6 percent) last year.
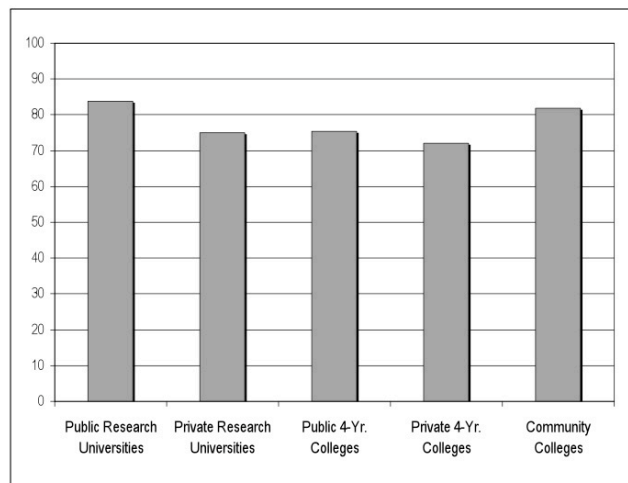
Figure 8: Opt-In Registration Policy for Emergency Notification Services (percentages by sector, 2008)

Campus policies and practices regarding participation in the emergency notification system have emerged as a key issue for most institutions. Data from the 2008 survey reveal that most campuses have a voluntary participation ("opt-in") policy regarding their notification systems (Figure 8). Consequently, the actual benefit of a campus investment in some emergency notification technologies such as text and voice messaging to student cell phones

may be limited if only a third of students or campus personnel are registered for the service.

Another aspect of planning for and implementing notification services involves funding: while overall IT funding improved from 2004 to 2007 (but shows the clear impact of the current economic downturn in 2008; see below), tapping current campus IT resources or acquiring new systems and services to develop an emergency notification system requires money. Consequently, the role that IT plays in emergency notification is an example of the "expanding domain" of campus IT resources and services. It is a fair guess that the institutions that acquired notification technology systems and services from commercial providers in the months following Virginia Tech in 2006 and perhaps even after campus tragedies in Delaware, Louisiana, and Illinois in 2007 and 2008 did not have this money in their IT (or other) budgets as of fall 2007. Rather, they either "found" the money (year end budget dust?) or took it from some other activity or program

Budget issues notwithstanding, technology is probably the easy (or an easier) part of emergency notification planning on campus. The hard part involves implementation: here the key issues are system testing (how fast will the messages be delivered? how reliable is the delivery?), user education for both campus officials and student recipients, having students provide and then update their contact information, decision trees about who activates a notification message and under what circumstances, and making sure that students who receive emergency messages do not view them as spam.

IT Budgets

Data from the 2008 survey confirm that the economic downturn affecting financial markets and state budgets has also hit campus IT budgets and, by extension, campus finances. In some sectors, the percentage of institutions reporting cuts in the central IT budget more than doubled from fall 2007 to 2008: public universities and public four-year colleges are the most adversely affected. More than two-fifths (45.4 percent) of public universities reported cuts in the central IT budget for fall 2008, up from just 16.3 percent in fall 2007. Similarly, 44.4 percent of public four-year colleges reported central IT budget cuts for the 2008-09 academic year, up from 16.7 percent last year. Other sectors also reported significant IT budget cuts for fall 2008, although the numbers were smaller: 22.8 percent of private universities experienced IT budget cuts in fall 2008 (compared to 6.6 percent in 2007), as did 23.5 percent of private four-year colleges (against 13.0 percent last year), and 24.6 percent of community colleges (up from 14.1 percent in 2007).

The survey data reveal that administrative computing budgets in private universities took a larger share of the budget reduction than the funding for academic computing (Figure 9). For example, 11.4 percent of private universities reported reductions in the funding for academic computing for fall 2008, compared to 22.8 percent reporting a cut in funding for administrative computing.
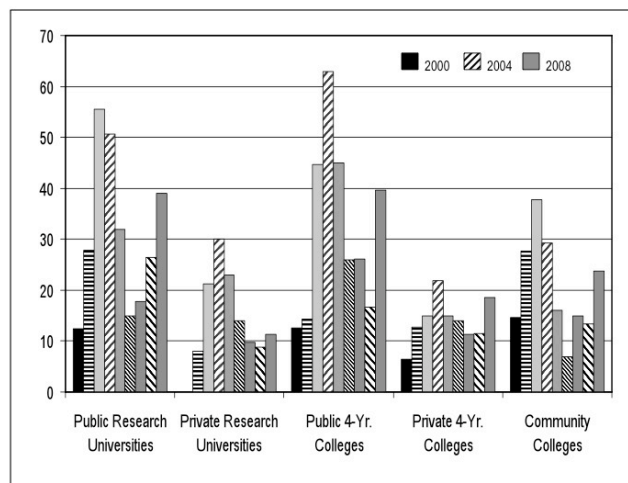
Figure 9: Budget Cuts in Academic Computing, 2000-2008
(percentage of campuses reporting budget cuts, by sector)

Even as IT budgets experienced reductions, the distribution of funds across key operational areas continues to reflect the changing IT priorities discussed above and shown below in Figure 10. For example, it should come as no surprise that IT security and emergency notification are the areas where the majority of institutions report budget gains in 2008. But even here the overall budget problems experienced in fall 2008 have affected allocations by IT function: for example, the percentage of institutions reporting increases in the budget allocation for IT security fell from 64.6 percent in 2007 to 56.2 percent in 2008; similarly, the percentage of institutions reporting increased budgets for emergency notification fell from 76.9 percent in last year to 56.5 percent in fall 2008.

The fall 2008 budget reductions come just as most American colleges and universities were beginning to recover from several years of annual IT budget cuts and mid-year budget recissions that marked the economic downturn during the first years of the current decade. Then as now, the irony is that the demand for IT resources and services continues to rise, even as the dollars supporting campus IT resources, services, and personnel are cut from institutional budgets. Moreover, the experience from recession in the early years of the current decade suggests that the 2008 IT budget cuts will likely be followed by mid-year budget recissions, compounding the impact of the budget reductions.
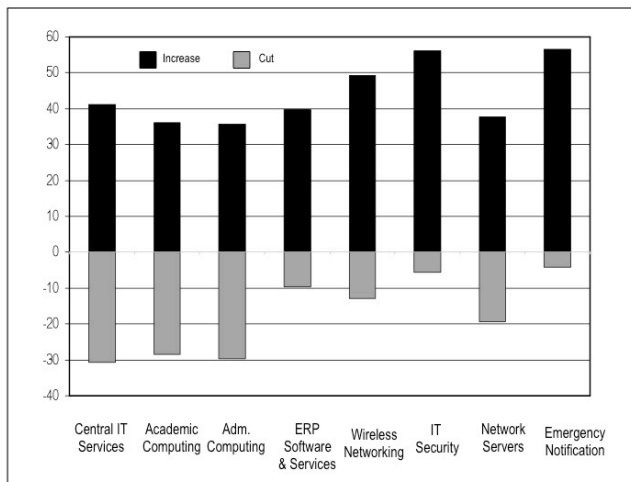
Figure 10: Budget Cuts and Increases by IT Function, 2008.
(percentage of campuses reporting budget cuts or increases)

Copyright, P2P, and Campus Codes of Conduct

Despite the well-publicized media industry outcry (and accompanying Congressional concern) about copyright violations and illegal peer-to-peer (P2P) file sharing involving college students, the 2008 survey data again confirm that American colleges and universities are making serious and sustained efforts to address the problem of illegal P2P downloading of music and movies on campus networks. As noted in past surveys, the vast majority of colleges and universities have campus policies to address inappropriate or illegal P2P downloading of copyrighted content: (84.1 percent in 2008, up from 66.2 percent in 2003; Figure 11).
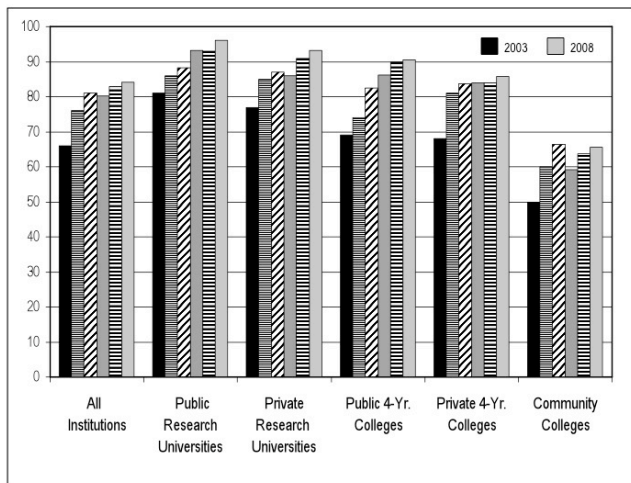
Figure 11: Campus Reporting Policies to Address P2P Downloading of Commercial Content on the Web (percentage of institutions with P2P policies, by sector, 2003-2008)

The data also provide additional information about the campus procedures intended to promote and enforce these policies. More than four-fifths of institutions (86.9 percent, up from 70.5 percent in 2007) report that students can lose

their campus network privileges for P2P violations, while more than half (56.9 percent, up from 45.9 percent in 2007) impose other kinds of sanctions for inappropriate P2P activity.

The fall 2008 survey also provides new information about the current level of compliance with the P2P provisions of the Higher Education Opportunity Act (HEOA) signed into law in August 2008. The new law requires colleges and universities (a) "develop plans to effectively combat the unauthorized distribution of copyrighted material;" (b) "to use a variety of technology-based deterrents" to stem illegal P2P activity on campus networks; and (c) "to offer alternatives to illegal downloading or peer-to-peer distribution of intellectual property."[3] Even though the P2P provisions of the HEOA apply to almost all two- and four-year public, private, and for-profit colleges and universities (i.e., postsecondary institutions that receive federal funds or whose students participate in federal financial aid programs), compliance levels currently vary dramatically across sectors – generally highest in universities, followed by four-year colleges, and then lowest in community colleges (Figure 12).
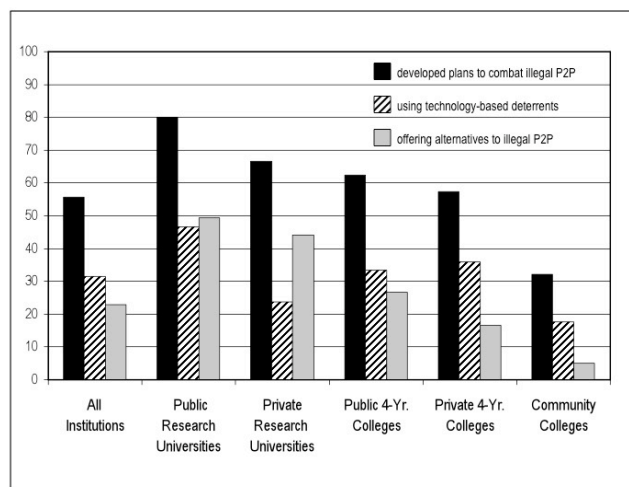
Figure 12: Campus Compliance P2P provisions of HEOA. (percentages, by sector, fall 2008)

Moreover, the P2P provisions of the HEOA pose real costs for colleges and universities – costs that include both increasingly tight IT budget dollars and also significant personnel time from IT units and other campus offices. Case in point: a summer 2008 survey on the campus costs of P2P compliance conducted by The Campus Computing Project found that the aggregated costs of special software, additional hardware, and personnel time allocated to various aspects of P2P compliance could total as much as half a million dollars

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[3] Hartle, T. W., *et. al.,* "HEOA Requirements and Next Steps Related to Peer-to-Peer (P2P) Filesharing on College and University Networks." (Washington, DC: American Council on Education), 11 August 2008, p. 1. http://net.educause.edu/ir/library/pdf/epo0815.pdf

annually for some institutions.[4] Additionally, the summer 2008 P2P compliance study found that among the comparatively small number of campuses that offered "alternatives" to illegal P2P filesharing, most were directing students to free, advertising supported services such as Ruckus Networks.

Course/Learning Management Systems

The 2008 data continue to confirm the increasingly important role of Course Management Software (CMS) or Learning Management Software (LMS) as a core instructional resource. Overall, the percentage of college courses that use a CMS/LMS tool has risen from a seventh (14.7 percent) in 2000 to more than half (53.5 percent) in 2008 (Figure 13). Although the numbers vary by sector, the rising deployment of (some might say rising campus dependency on) CMS/LMS occurs across all sectors.

Reflecting the critical role that the LMS now plays in instruction at the majority of institutions, more than three-fifths (63.5 percent) of the colleges and universities partici-pating in the 2008 survey report a strategic plan for CMS/LMS deployment, up from percent 60.2 last year, half (51.4 percent) in 2003, and 41.8 percent in 2001. Admittedly, while these numbers track rise of LMS utilization, they do not provide any data about the depth of deployment, i.e., how many of the features and how much of the functionality of the LMS are being used by students and faculty in individual courses and across the various sectors of American higher education.
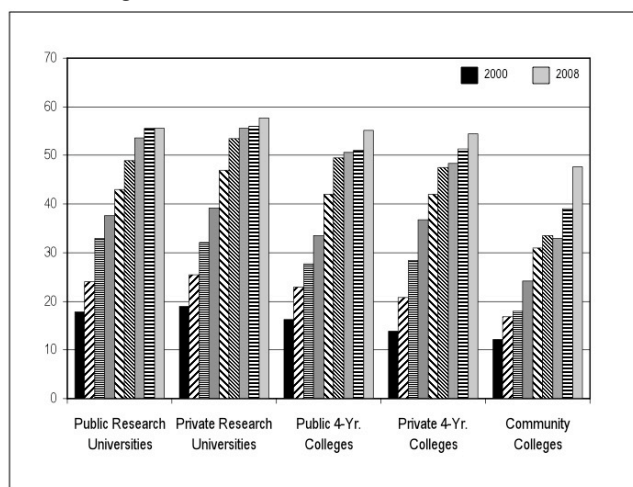
Figure 13: Rising Use of CMS/LMS in Instruction (percentage of classes using CMS/LMS, by sector, 2000-2008)

Not surprisingly, Blackboard has the largest share of the CMS/LMS market. As shown in Figure 14, among campuses

reporting a "single product" campus standard LMS as of fall 2008, the percentage of institutions that identify Blackboard as the institutional LMS runs from 45.8 percent in private four-year colleges to 70.7 percent in private universities. Although the numbers vary by sector, other commercial LMS providers – primarily Angel Learning and Desire2Learn – each account for about seven percent of campus CMS/LMS deployments. In aggregate (but also with variations by sector), Open Source LMS applications (Moodle and Sakai) together account for 13.3 percent of the campuses reporting a campus standard CMS/LMS appli-cation, up from 10 percent in 2007 and 7.2 percent in 2006.
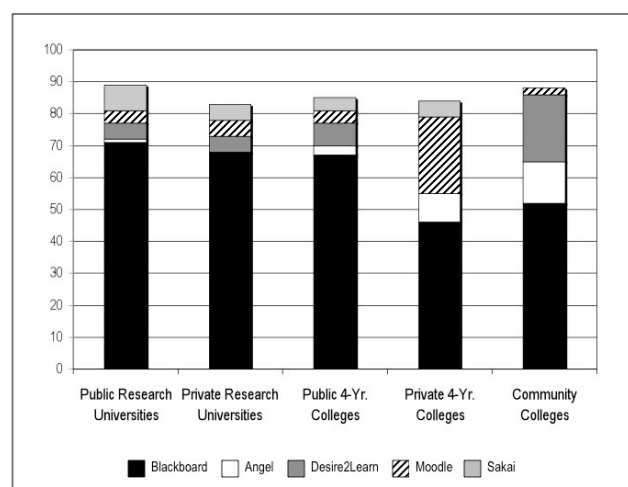
Figure 14: Campus LMS Providers, Fall 2008 (percentages for campuses reporting a "single product campus-wide LMS standard, by sector).
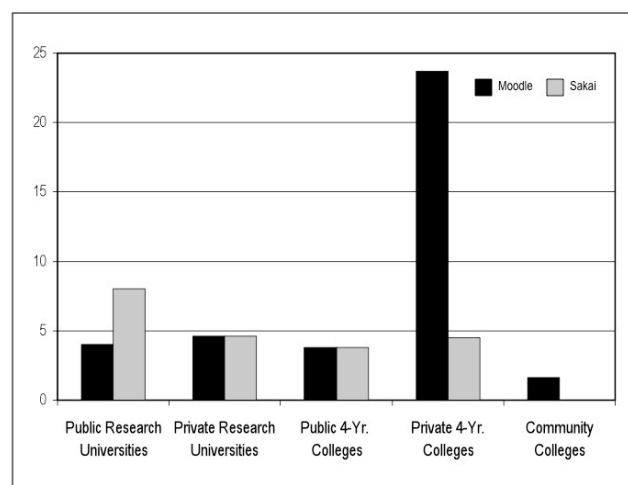
Figure 15: Institutions Reporting a Campus Standard Open Source LMS, 2008 (percentages, by sector)

The rising campus presence of four LMS applications – Angle, Desire2Learn, Moodle, and Sakai – in the years following Backboard's acquisition of WebCT in February 2006 has brought clear competition to the campus market for learning management systems. Although still dominant

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[4] Green, Kenneth C. "The Campus Costs of P2P Compliance." (Encino, California: The Campus Computing Project), October 2008. http://www.campuscomputing.net/ content-item/new-campus-costs-p2p-compliance

across all sectors, the survey data reveal that Blackboard's share of the campuses reporting a "single product LMS standard" has fallen in each sector since 2006. Perhaps the most interesting of Blackboard's LMS competitors are the two Open Source LMS applications – Moodle and Sakai. As previously noted, the percentage of institutions reporting a campus-standard Open Source LMS has almost doubled in the past two years, rising to 13.3 percent in 2008. Yet shown in Figure 15, the deployment of Sakai is highest in public research universities (8.0 up from 5.1 percent in 2007) while Moodle now serves as the campus-standard LMS in almost a fourth of private four-year colleges (23.7 percent, compared to 17.2 percent in last year). This rising competition would seem to affirm this researcher's 2004 observation that the campus LMS market is "a mature market with immature products" – virtually all institutions have an LMS license but the products are still relatively young: the survey data confirm that the LMS market remains volatile and competitve.[5]

Migrating to Open Source ERP Applications

Despite the rising deployment of Open Source LMS applications, this year's survey data point to little change in the "affirmative ambivalence" towards Open Source ERP applications among senior campus technology officers first reported in 2004. Almost three-fifths (59.3 percent, compared 57.3 percent in 2007 and 51.9 percent in 2004) agree that "Open Source will play an increasingly important role in our campus IT strategy." However, less than a third of this year's survey respondents (28.0 percent, percent, compared to 27.6 percent last year and 28.9 percent in 2004) agree that Open Source "offers a viable alternative" for key campus administrative or ERP applications such as student information systems, campus financial systems, or personnel/human resource software (Figures 16 and 17). Taken together, these data indicate that campus IT officials are twice as likely to agree that Open Source looms large in the future (59.3 percent) as they are to agree that Open Source currently offers viable options for ERP applications (28.0 percent).

This affirmative ambivalence is not surprising given that LMS and ePortfolio modules are the only two released and deployed Open Source ERP applications; the Kuali Open Source applications – financial and student information systems, human resources, research administration, and development – are not yet in final release.

Yet even with the continuing "affirmative ambivalence," the recent gains for Moodle and Sakai are interesting, suggesting that ten years after the deployment of the first commercial LMS applications, campus officials and faculty advisory committees are reviewing seriously the various

LMS offerings from both commercial providers and the collaborative Open Source community. Faculty and senior campus IT officials are eager for information about the deployment experience of the institutions that have been the early adopters of Open Source LMS applications. UCLA's decision to move to Moodle as the campus-standard LMS as of fall 2008 may serve as a catalyst for other institutions, to review their LMS deployment activities and options. Additionally, a discussion on the EDUCAUSE CIO ListServe in September 2008 provided the names of other campuses, large and small, that have migrated to an Open Source LMS. [6]
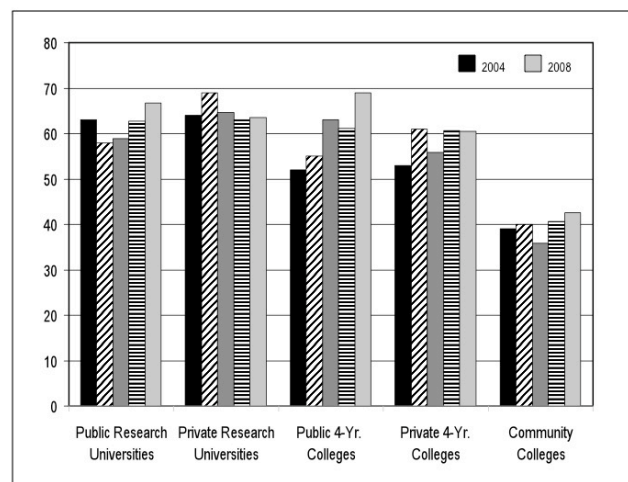
Figure 16: Open Source Will Play an Increasingly Important Role in Our Campus IT Strategy, 2004-2008 (percentages, by sector)

Interestingly, the survey data suggest a "just do it" strategy with regard to Open Source deployment. Comparatively few colleges and universities have developed a strategic plan for Open Source as of fall 2008: only a seventh (14.4 percent) of institutions currently report a strategic plan for Open Source development and deployment, up slightly from 12.3 percent in 2007 and 10.0 percent in 2006. Across sectors, the percentage of institutions with a strategic plan for Open Source deployment ranges from 20.0 percent in public research universities (compared to 17.7 percent in 2007) to 6.6 percent in community colleges (up from 2.7 percent in 2007).

Moreover, even without strategic plans, the 2008 survey data point to serious and significant Open Source development and deployment, involving both back room system tools as well as the emerging set of (still early stage) Open Source ERP applications. Fully one-fifth (20.0 percent) of institutions report increased funding for Open Source development and deployment in 2008, about the same as in

[5] Green, Kenneth C. 'Sakai and the Four Cs of Open Source." *Campus Technology,* March 2004 http://campustechnology.com/Articles/2004/02/Sakai-and-the-Four-Cs-of-Open-Source.aspx

[6] Information about the UCLA decision to migrate to Moodle is available on the Web: http://www.oit.ucla.edu/ccle/default.htm The EDUCAUSE CIO ListServe discussion ran from Sept 9-12, 2008. http://listserv.educause.edu/cgi-bin/wa.exe?A1=ind0809&L=CIO

2006 and 2007. Additionally, when asked to describe their campus strategy on Open Source tools, two-fifths (40.3 percent, compared to 38.6 percent last year and 36.4 percent in 2006) of the survey respondents report that their campus is "sampling" Open Source tools for central IT services, primarily using backroom or infrastructure tools (for example, Apache server software or email utilities); additionally, more than a third report that Open Source tools are either "operational" (14.8 percent) or "mission critical" (17.1 percent) for their institutions, or that their campus is engaged in Open Source development work that includes contributing tools for central IT operations (3.0 percent).
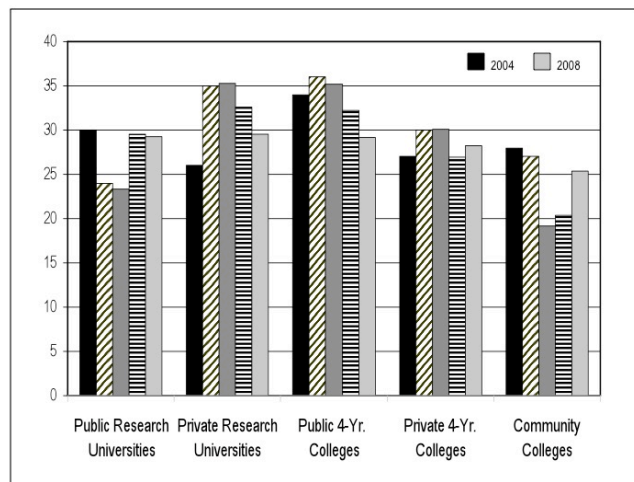
Figure 17: Open Source Offers a Viable Alternative for Key Campus ERP Applications, 2004-2008 (percentages, by sector)

Finally, affirmative ambivalence notwithstanding, a new item on the 2008 survey reveals that only a small percentage of the survey respondents believe that there is a high likelihood that their institution will migrate to various Open Source ERP applications by 2013 (Figure 18). Not surprisingly, the numbers are highest for Open Source LMS applications, which are already deployed on many campuses. IT officials in public universities appear somewhat more likely to predict migration to Open Source ERP applications than their peers in other sectors. Still, the far lower numbers for other applications – student information systems, finance, human resource, research management, and development – no doubt reflect the absence of campus experience with the emerging Kuali Open Source ERP modules (www.kuali.org). The numbers for likely migration to Open Source applications will no doubt rise following the release and initial implementation of the Kuali modules by a small group of early adopter institutions.

Migrating to SaaS-Based ERP Applications

The 2008 survey also provides new data about migration to Software-as-a-Service (SaaS)-based ERP applications. As above, the only a small number of survey respondents believe that their institutions will migrate to SaaS-based ERP applications by 2013; in general, the numbers are a little lower for migration to SaaS-based applications than the migration to Open Source (Figure 19).
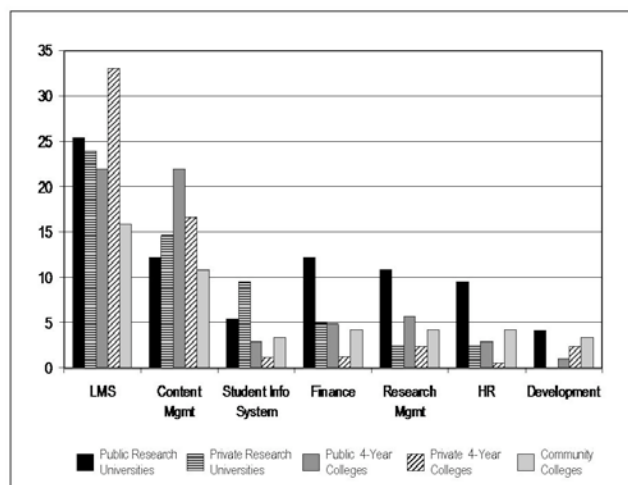
Figure 18: Campuses Reporting a High Likelihood of Migrating to Open Source ERP Applications by 2013 (percentage reporting a scale score of 6 or 7 for likely migration to Open Source in five years, by sector; scale: 1=low; 7=high)

Interestingly, where respondents in public research universities are often more likely than their peers to anticipate moving to Open Source ERP applications, the survey data reveal that IT officers in community colleges are generally more likely than their peers in other sectors to anticipate a move to SaaS-based ERP applications by 2013. The higher numbers for SaaS among community colleges are
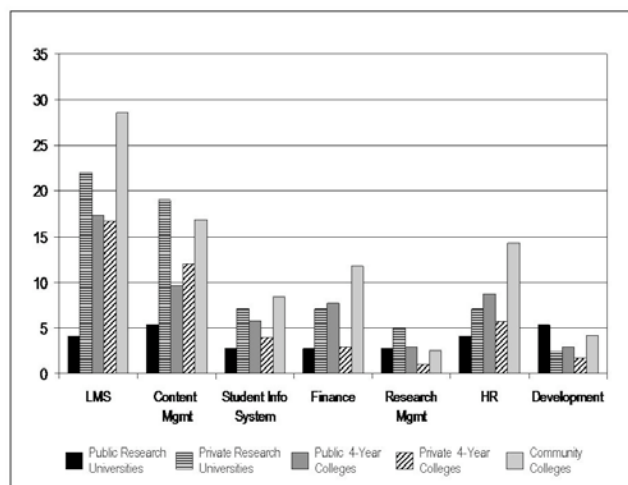
Figure 19: Campuses Reporting a High Likelihood of Migrating to SaaS-based ERP Applications by 2013 (percentage reporting a scale score of 6 or 7 on a 7 point scale for likely migration to SaaS in five years, by sector; scale: 1=low; 7=high)

not necessarily surprising: these institutions typically have smaller tech staffs to support administrative operations than other public sector institutions. Moreover, the movement to SaaS-based ERP applications does not necessarily involve a

change in the software, only the expansion of the services offered by the institution's current ERP provider. Additionally, many multicampus community colleges currently operate under a SaaS-like structure for their ERP systems, as one data center may service several campuses in a community college district.

As with the migration to Open Source ERP applications, the numbers for migration to SaaS-based applications will no doubt rise in the coming years once the larger campus community receives reports about the experience of the early adopters. An additional factor involving SaaS applications involves the willingness of campus IT officials to trust their service providers to host, service, and protect mission critical and highly confidential institutional data.

Strategic Planning for IT

The 2008 survey data again highlight the continuing challenge that IT planning presents to American colleges and universities. Almost three-fourths (73.3 percent) of campuses participating in the 2008 survey report an institutional strategic plan for information technology, essentially unchanged from 2007 (73.2 percent), and rising slowly over the past decade from 48.0 percent in 1998, 63.3 percent in 2001, 70.0 percent in 2004.

As noted in past reports, these numbers suggest important and impressive gains in campus efforts to anticipate and to address a wide array of critical information technology challenges between 1998 and 2008. Yet as in past years, additional data from the annual Campus Computing Surveys suggest that the strategic plans at many institutions may be incomplete. As one example and as noted above, many colleges and universities have yet to complete or update strategic plans for network security or IT disaster planning.

Indeed, as reported in past years, probe just a bit below the surface numbers and it quickly becomes clear that some key issues are often missing from the overall IT strategic plan at many colleges and universities. For example, just over two-thirds (69.5 percent) of the 2008 survey respondents report an IT financial plan that acknowledges the need to "acquire and retire" aging equipment and software. This compares to 66.2 percent in 2006, 54.7 percent in 2002, half (52.2 percent) in 2000, and just a fifth (21.9 percent) in 1994. While these gains on institutional IT financial plans between 1994 and 2008 are important, the survey data also reveal that fully two decades into the so-called "IT revolution in higher education," almost a third (30.5 percent) of the institutions participating in the 2008 survey still do not have "real" IT financial plans. Moreover, many institutions reporting "acquire and retire" plans for financing IT are often not able to fully-fund these plans when confronted with budget cuts and mid-year budget recissions.

Other metrics from the 2008 survey also confirm that many institutional IT plans may be incomplete. Almost a third (30.1 percent) of the participating campuses do not have strategic plans for upgrading or replacing core administrative/ERP software systems, a number that remains essentially unchanged over the past three surveys (2006-2008). Less than half (48.3) of the colleges and universities participating in this year's survey have a strategic plan for student portal services, a slight improvement from 2005 and 2006 (approximately 42-44 percent), and up from a third (36.4 percent) in 2004, a fourth (24.5 percent) in 2002, and one-eighth (12.6 percent in 2000).

Other areas show even larger gaps. Evan as mobile phones have become an important component of campus emergency notification plans, only a fourth (26.1 percent) of colleges and universities have a strategic plan for the role of cellular and smart phones in the larger campus IT plan (up from 19.3 percent in 2007). A new item on the 2008 survey revels that less than a fifth (17.0 percent) of institutions have a strategic plan to address email and document archiving for eDiscovery requirements. Finally, despite the proliferation of Web 2.0 activities and applications on- and off-campus over the past three years, only tenth (9.5 percent) of institutions participating in the 2008 Campus Computing Survey report a strategic plan for Web 2.0 (up from 5.0 percent in 2007).

The data highlighting key gaps in campus IT planning should be of concern to campus IT leaders and also to other senior campus officials: the percentage of colleges and universities that have not yet addressed key IT issues as part of the overall IT strategic plan remains significant.

Yet in fairness to campus IT officials it is also important to note that the number of the components or issues now found in many (if not most) campus IT strategic plans have expanded in recent years, most recently with the addition of emergency communications and notification services, and Web 20 issues. Moreover, IT strategic planning is often reactive, affected by current events (e.g., campus tragedies such as Virginia Tech), legislation (e.g., archiving and eDiscovery requirements; Congressional mandates on P2P), or new technologies (e.g., smart phones and Web 2.0). The small number of colleges and universities that may have had IT strategic plans in 1993 or 1994, perhaps developed or revised as part of a Self-Study report prepared for accreditation, would have found their plans to be obsolete by 1995 or 1996 because of the emergence of the Web in the mid-1990s. Similarly, although CIOs and other campus officials have long been concerned about network security and IT disaster recovery, these issues emerged as far more important institutional priorities in the post-9-11/post-Katrina environment.

Outsourcing IT Services

With the exception of student email, senior campus IT officers assign a low priority to outsourcing various IT services over the next two-three years. (Figure 20). Student email receives the highest priority as an outsourced service (scale score 4.5; scale: 1=not important; 7=very important). In contrast, three outsource service options score between 3.0 and 3.5 (campus portal, data back-up/storage, and web hosting) while five other categories of potential outsourced services score between 2.4 and 3.0 (ERP services, instructional technology services, user support services, ResNet services, and eProcurement). Most items on the outsourcing list experienced little change between 2007 and 2008, save for student email, which jumped from a scale score of 3.8 last year to 4.6 in the 2008 survey.

Parallel with the rising priority for outsourced email services are new data revealing that two-fifths (42.4 percent) of the institutions participating in the 2008 survey "have converted/are converting to" outsourced student email; in contrast, just a seventh (14.8 percent) report conversion to outsourced email for faculty. As shown in Figure 21, fully half of public research universities (50.7 percent) currently (or will soon) outsource student email, compared to about two-fifths of the institutions in other sectors. Google is the outsourced email provider for the majority of campuses outsourcing student mail (56.6 percent), while two-fifths use Microsoft and 4.8 receive outsourced email services from Zimbra (Figure 22).
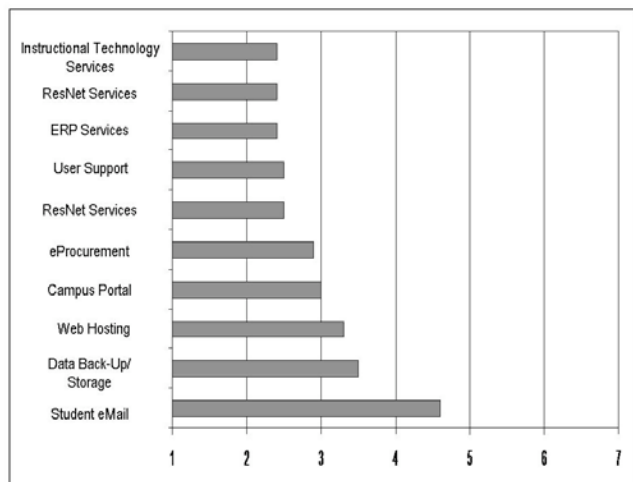
Figure 20: Rating the Importance of Outsourcing IT Services, Fall 2008. (scale: 1=not important; 7=very important)

Why migrate to outsourced student email services? Clearly budget issues are a catalyst: eliminating student email allows institutions to redeploy money and other IT resources; the savings may run from small to significant. Also an issue is that unlike their counterparts of two decades ago, students now arrive on campus with a email addresses and established email identities and preferences: Student Monitor's fall 2008

survey of full-time students at four-year colleges and universities reveals that individual undergraduates have, on average, 2.6 email addresses and that just a third (35 percent) consider their campus (.edu) email address to be their primary email account or email identity.[7]
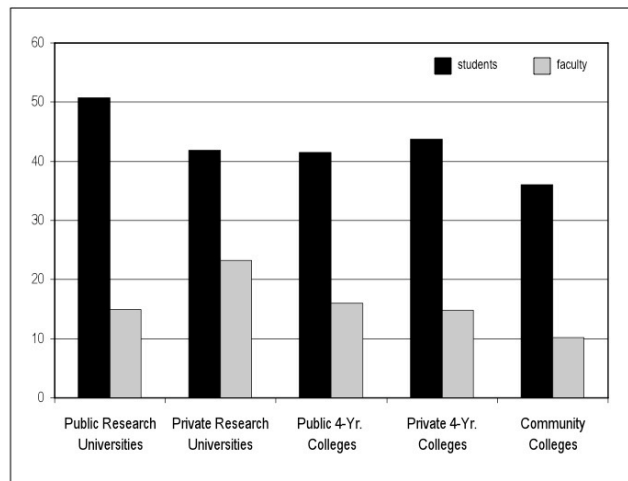
Figure 21: Outsourcing Student and Faculty eMail, Fall 2008 (percentages by sector)
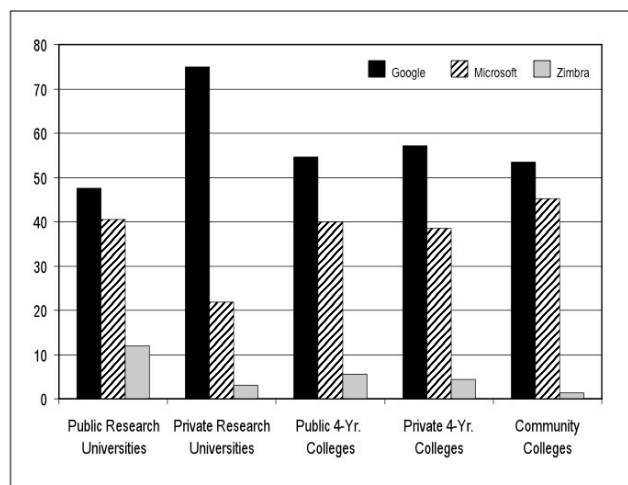
Figure 22: Outsourced Student eMail Providers, Fall 2008 (percentages by sector)

A small number of campuses are also outsourcing their help desk/user support services: almost tenth (9.1 percent, about the same as in 2007) report they are currently outsourcing help desk/user support services while another eighth (12.3 percent) plan to review outsourced user support services during the current academic year. Outsourced help desk services are highest in private research universities (15.9 percent) and community colleges (14.8 percent); in contrast, about 6 percent of public research universities, public four-

[7] Student Monitor, "Computing and the Internet: Fall 2008." (Ridgewood, NJ), October 2008. www.studentmonitor.com

year colleges, and private four-year colleges report outsourced user support services.

Antiplagiarism Software

A new item on the 2008 survey reveals the wide deployment of antiplagiarism software. More than half (54.7 percent) of institutions participating in the survey report a site license for an antiplagiarism product (Figure 23). Licensing agreements are highest in public four-year colleges (66.7 percent), followed by private universities (64.3 percent), public universities (62.2 percent), private four-year colleges (43.2 percent), and community colleges (54.1 percent).

The wide deployment of antiplagiarism software reflects the growing concern about both "accidental" and intentional plagiarism among undergraduates; it also comes amidst research suggesting increased incidents of cheating among college students.[8] Many students simply do not know or do not attend to the established rules for citing sources in their academic papers, while others may intentionally clip and copy material from the Internet or other sources. Unfortunately, campus licenses for antiplagiarism products are an additional institutional expense in times of stressed campus budgets.
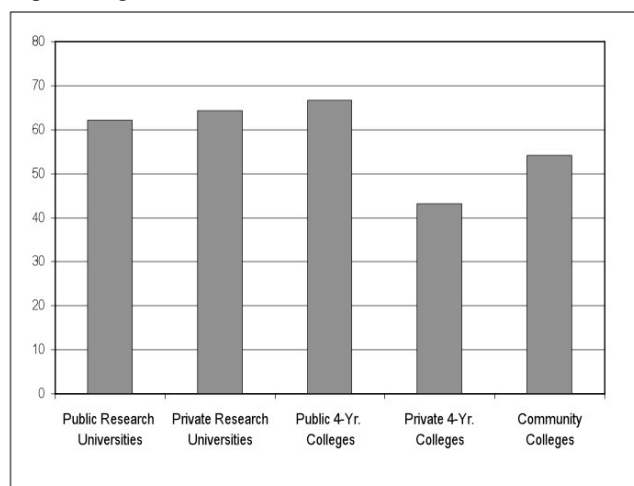
Figure 23: Antiplagiarism Licenses (percentages by campus sectors, fall 2008)

Classroom Clickers

The survey data document the rising use of classroom clickers across all sectors (Figure 24). Although the overall numbers are generally low – about seven percent in public and private universities and public four-year colleges, five percent in private four-year colleges, and four percent in community colleges – the proportion of classes using clickers has almost doubled since the 2005 survey.

[8] See, for example, Glater, J, "Colleges Chase as Cheats Shift to Higher Tech" *New York Times,* 18 May 2006 www.nytimes.com/education/2006/05/18/18cheating.html and Jaschik, S., "Winning the Hearts and Minds in the War on Plagiarism."656565 *Inside Higher Education* 7 Apr 2008. www.insidehighereducation. com/ news/2008/04/07/plagiarism

Moreover, because clickers are almost exclusively found in (often large) lower-division undergraduate classes, the gains reflected in the survey data may actually understate the significance of clickers and classroom response systems as a technology resource to support instruction.
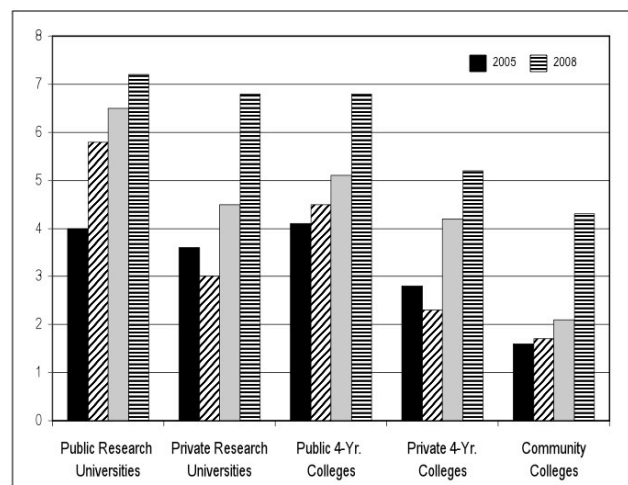
Figure 24: Percentage of Courses Using Classroom Clickers (percentages by campus sectors, 2005-2008)

ePortfolios

The proportion of institutions offering ePortfolio services for their students has tripled in six years, rising from 13.5 percent in 2003 to 39.8 percent in 2008 (and up from 34.9 percent in 2007; Figure 25). There is no question that ePortfolios have gained attention in recent years because of the increased campus discussion about assessment and student outcomes. Additionally, they have become increasingly important to undergraduates in public four-year colleges, reflecting the role of ePortfolios in the assessment and accreditation of teacher education programs.
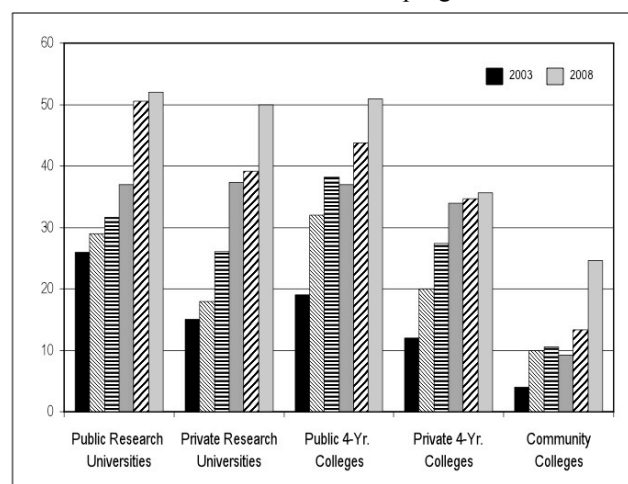
Figure 25: ePortfolio Services (percentages by campus sectors, 2003-2008)

Moving Towards Web 2.0

The technology community's engagement with Web 2.0 seems to be moving very slowing in higher education. Although many faculty and students are involved in Web 2.0 activities, the survey data presented in Figure 26 suggest that postsecondary institutions have been slow to engage (let alone embrace) the world of Web 2.0 and user-provided content: even though the percentage of institutions reporting a strategic plan for Web 2.0 resources and services almost doubled from 2007 to 2008, the number still remains very low (9.5 percent in 2008, up from 5.0 percent last year).

The percentage of institutions reporting an official campus presence on Facebook more than tripled among public research universities from 2007 to 2008 (from 10.5 to 36.0 percent) and rose by a factor of five for private universities (from 6.8 to 37.2 percent). Other sectors experienced similar gains on an official campus presence on Facebook: up by a factor of three in public four-year colleges (from 7.8 to 25.5 percent), doubling in private four-year colleges (rising to 33.3 from 16.8 percent), and more than doubling among community colleges (from 12.2 to 30.3 percent). The percentage of institutions reporting campus presence on MySpace also increased between 2007 and 2008, but the gains were not as dramatic as the increases posted for Facebook.
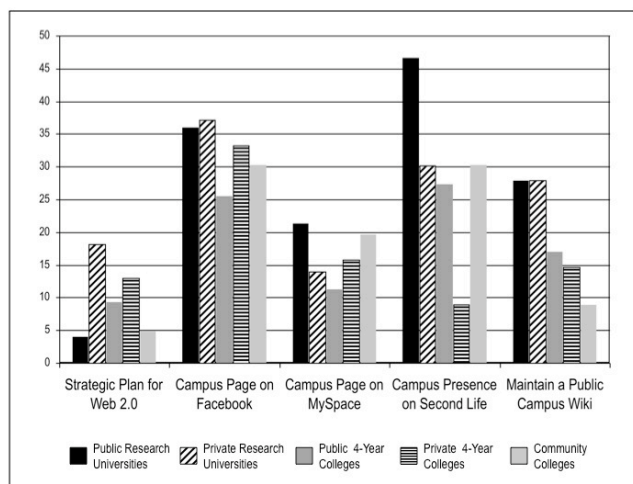
Figure 26: Web 2.0 Activities (percentages by sector, fall 2008)

Wikis are moving slowly into official campus web sites as a navigational and information resource. Overall, the percentage of campuses reporting a "public campus Wiki" rose from 13.0 percent in 2007 to 16.7 percent in 2008; more than a fourth of public and private universities have a public campus Wiki, compared to 17.0 percent in public four-year colleges, 14.7 percent in private four-year colleges, and 9.0 percent in community colleges.

The data for Second Life shown in Figure 26 are difficult to assess: the percentage of institutions reporting an "institutional presence on Second Life" rose from 15.6

percent in 2007 to 24.9 percent in 2008. Yet anecdotal data suggests that in some instances this is an "official" and active campus presence, while in other instances it may be that campus officials "purchased the island" to protect the campus name/brand, much as many colleges and universities registered their URLs (domain names) well ahead of building their campus web sites.

IT Evaluation and Assessment

One of the most interesting IT challenges confronting CIOs and other campus officials involves campus efforts to assess the impact of institutional investments in information technology.

As reported in past Campus Reporting reports and as shown in Figure 27, senior campus IT officials continue to affirm the need for IT assessment and evaluation efforts – assessing the benefits of the campus IT investment, surveying students and faculty about IT issues and services, and assessing the "return on investment" (ROI) for campus IT spending. Still, the survey data also highlight the continuing gap between CIO agreement about the need to engage in IT assessment and the actual level of IT assessment and evaluation activities.
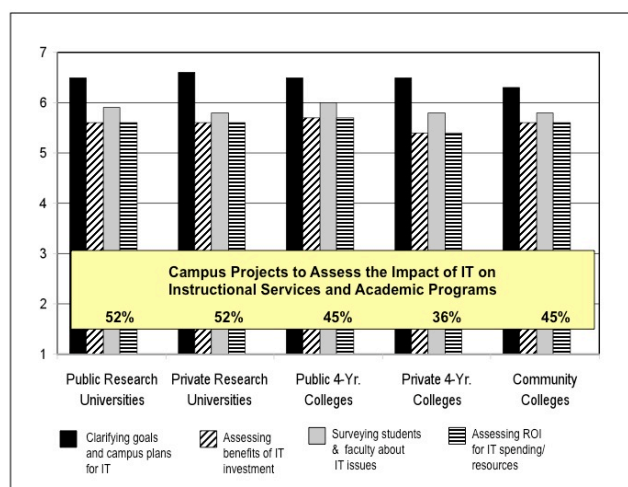
Figure 27: CIO Support for IT Assessment and Evaluation, 2008
(scale: 1=strongly disagree; 7=strongly agree)

However, the interesting news in the 2008 data is that more campuses have launched campus projects to assess the impact of IT on instructional services and academic programs. As shown in Figure 28, more than two-fifths (43.6 percent) of the surveyed institutions report campus initiatives to "assess the impact of IT on instructional services and academic programs" as of fall 2008, compared to 41.8 percent in 2007, a third in 2006 (35.7 percent) and also a third (34.0 percent) in 2001.

As noted in past Campus Computing Reports, several factors suggest that IT evaluation and assessment will be an increasingly important issue for colleges and universities

over the net few years. Campus technology officials (and IT advocates) confront continuing questions from a variety of constituencies – faculty, presidents and provosts, board members, accrediting associations and, for public institutions also elected officials – about the costs, impact, and benefits of the continuing campus investment in information technology.
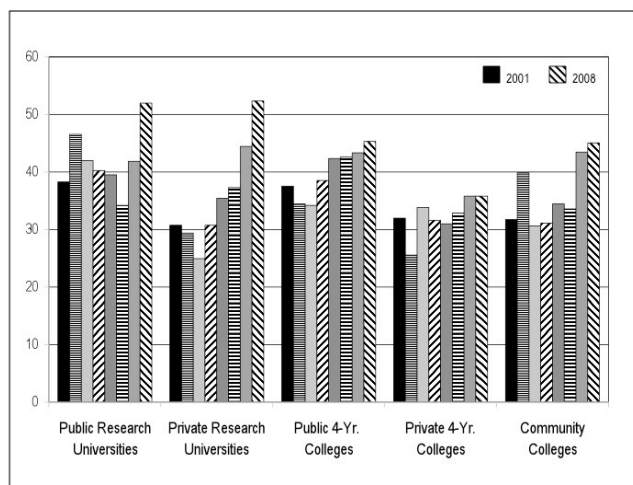
Figure 28: Campus Projects to Assess the Impact of IT on Instructional Services and Academic Programs, 2001-2008. (percentages by campus sector)

Postsecondary institutions confront these questions in part because of sectors of the American economy have experienced productivity and other benefits from information technology. These questions, highlighted by the September 2006 Spellings Commission Report on the future of American higher education, are part of the larger discussions about higher education, institutional assessment, and student outcomes and the key role that IT investments could play in providing critical data, information, and insight to help address these pressing issues.[9]

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[9] See Green, Kenneth C. "Bring Data: A New Role for Information Technology After the Spellings Commission" *EDUCAUSE Review,* **41** (6), Nov/Dec 2006. http://connect.educause.edu/Library/EDUCAUSE+Review/BringDataANew See also *A Test of Leadership: Charting the Future of U.S. Higher* Education www.ed.gov/about/bdscomm/list/hiedfuture/reports.html

CAMPUS COMPUTING 2008

	All Institutions	Universities		4-Year Colleges		2-Year Colleges
		Public	Private	Public	Private	Public
Number of Institutions	527	75	44	106	177	122
GENERAL CAMPUS POLICIES ABOUT DESKTOP COMPUTERS						
Does your institution have:						
A formal policy promoting or mandating computers/ technology resources for						
Curriculum utilization?	30.7	30.7	27.3	23.6	31.3	36.1
Undergraduates?	38.0	42.7	34.1	31.1	43.8	32.8
Graduate/professional students?	22.6	41.3	36.4	25.5	23.9	1.6
Distance education?	34.7	40.0	29.5	34.0	26.7	45.1
A computer instruction, computer competency, technology literacy, or information literacy requirement for						
All undergraduates?	41.4	29.3	38.6	45.3	45.5	39.3
All faculty?	9.3	2.7	4.5	6.6	13.1	11.5
All administrators?	8.2	1.3	4.5	7.5	11.4	9.0
All staff?	9.7	4.0	-	8.5	14.2	10.7
A special computer use/technology fee or annual/term computer use charge for all students?	55.4	74.7	38.6	70.8	37.5	62.3
Average computer use fee (where charged)	$ 131	$ 160	$ 121	$ 128	$ 119	$ 128
A written policy/code of conduct/acceptable use policy for						
Campus e-mail accounts?	96.8	97.3	100.0	99.1	98.9	90.2
Campus-hosted individual/personal Web pages?	78.7	93.3	84.1	83.0	85.2	55.7
Duplication of copyrighted software/software piracy?	94.3	98.7	97.7	97.2	95.5	86.1
Fair use of copyrighted content (books, articles, etc.)?	91.8	92.0	95.5	95.3	93.8	84.4
Downloading commercial music/videos from the Web?	84.1	96.0	93.2	90.6	85.8	65.6
Student use of social networking sites (Facebook, MySpace, etc.)?	14.6	17.3	20.5	13.3	14.8	12.3
Operating systems recommended/supported*						
Mac OS X	89.4	98.7	95.5	97.2	87.5	77.9
UNIX	59.4	82.7	75.0	64.2	52.3	46.7
Linux	74.6	89.3	81.8	84.9	65.9	67.2
Windows NT Workstation	16.5	26.7	22.7	18.9	9.7	15.6
Windows 2000/XP	98.7	100.0	100.0	99.1	98.3	97.5
Windows Vista	65.3	74.7	72.7	62.3	65.9	58.2
Open VMS	11.2	10.7	11.4	24.5	5.7	8.2
Sun/Open Solaris	43.1	77.3	61.4	50.0	31.3	27.0
Novell	26.6	34.7	22.7	28.3	19.3	32.0
None (No O/S recommendation)	0.6	-	-	-	1.1	0.8
Do you require or strongly recommend computer or PDAs/handhelds for students						
Computers for all undergraduate students						
No	48.8	37.3	36.4	48.1	32.4	85.3
Recommend	44.0	53.3	52.3	46.2	58.0	13.1
Require	7.2	9.3	11.4	5.7	9.7	1.6
Computers for all undergraduates in specific disciplines or academic programs						
No	39.5	9.3	22.7	27.4	44.3	68.0
Recommend	40.0	46.7	50.0	53.8	39.8	20.5
Require	20.5	44.0	27.3	18.9	15.9	11.5
PDAs/handhelds for undergraduates in specific disciplines/academic programs						
No	81.8	69.3	72.7	75.5	85.8	92.6
Recommend	11.2	22.7	18.2	12.3	8.5	4.1
Require	7.0	8.0	9.1	12.3	5.7	3.3
iPods or other multi-media devices in specific disciplines/academic programs						
No	89.5	78.7	86.4	87.6	93.2	94.2
Recommend	9.0	21.3	9.1	7.6	6.8	5.0
Require	1.5	-	4.6	4.8	-	0.8
Cell phones for all students						
No	89.3	89.3	88.4	88.6	84.1	97.5
Recommend	10.7	10.7	11.6	11.4	15.9	2.5
Require	-	-	-	-	-	-
Smart phones for all students						
No	96.5	94.5	92.9	94.2	97.7	99.2
Recommend	3.5	5.5	7.1	5.8	2.3	0.9
Require	-	-	-	-	-	-
Does your institution (or individual units or programs) recommend a particular brand or product for*						
Hardware						
students?	43.6	49.3	68.2	41.5	48.3	27.0
faculty?	83.1	66.7	84.1	90.6	88.1	79.5
administrators/staff?	84.6	69.3	86.4	92.5	89.2	80.3
Software						
students?	71.2	69.3	84.1	75.5	81.3	48.4
faculty?	91.1	78.7	90.9	94.3	94.9	90.2
administrators/staff?	92.4	80.0	93.2	96.2	96.0	91.0
percentages by campus category.						
*Columns may total more than 100% since responses were not mutually exclusive.						
As of fall 2008, will your campus have "preferred provider" agreements with technology companies that include online hardware and software resale programs linked to your campus web site?						
No	24.3	10.7	9.1	23.6	21.6	41.8
Yes, hardware						
Acer	0.2	-	-	-	-	0.8
Apple	50.1	78.7	84.1	58.5	51.1	12.3
Dell	55.6	81.3	84.1	58.5	51.7	33.6
Gateway	10.6	25.3	2.3	14.2	8.0	5.7
HP/Compaq	19.5	41.3	15.9	20.8	15.9	12.3
Lenovo	15.0	28.0	29.5	17.9	13.6	1.6
Sony	2.3	8.0	2.3	0.9	1.7	0.8
Sun	4.9	12.0	15.9	4.7	2.3	0.8
Toshiba	3.2	5.3	4.5	4.7	1.7	2.5
Yes, software						
Adobe	41.7	57.3	52.3	37.7	40.9	33.6
Apple	34.5	56.0	50.0	42.5	30.1	15.6
Microsoft	64.1	80.0	70.5	67.0	67.0	46.7
Statistical software	37.2	65.3	52.3	46.2	36.9	7.4
Virus protection/spyware products	54.6	77.3	63.6	60.4	56.8	29.5
As of fall 2008, will your institution have an initial or single sign-on campus portal?						
No, campus portal not available as of fall 2008	13.3	8.0	9.1	10.4	12.5	21.3
No, portal issue now under discussion/review	15.4	9.3	11.4	12.3	19.3	17.2
Yes, portal being installed/under development in 2008/09	15.8	9.3	6.8	17.0	18.2	18.0
Yes, campus portal up and functioning for fall 2008	55.6	73.3	72.7	60.4	50.0	43.4
percentages by campus category.						

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
Our campus portal is/will be:*						
Homegrown/local	18.8	16.2	12.2	25.3	17.5	18.8
Blackboard/WebCT	6.1	7.4	4.9	1.1	8.7	6.9
Campus Cruiser	1.1	-	-	-	0.7	4.0
eCollege	0.4	-	-	-	0.7	1.0
Jenzabar	6.4	-	-	3.2	16.8	1.0
Oracle/PeopleSoft	10.5	14.7	14.6	19.0	7.4	2.0
SunGard Higher Ed/Luminis-Campus Pipeline	27.4	33.8	36.6	33.7	17.5	28.7
Sun Microsystems Portal	0.7	1.5	2.4	-	0.7	-
TimeCruiser	0.2	-	-	-	-	1.0
Unicon/Academus	1.1	-	2.4	1.1	0.7	2.0
uPortal	7.0	13.2	9.8	9.5	5.4	2.0
Other	20.4	13.2	17.1	7.4	24.2	32.7
percentages by campus category.						

USES OF INFORMATION TECHNOLOGY

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
How strongly do you agree or strongly agree:*						
Faculty have unreasonable expectations about user support	45.6	32.0	52.3	44.3	50.3	46.7
Technology has improved instruction on my campus	93.8	97.3	93.2	95.3	89.3	96.7
We plan to require all students to own a computer by fall 2009	9.7	14.7	11.4	6.6	13.0	3.3
Access to Internet 2 by fall 2009 is essential to our long-term tech needs	37.1	85.3	68.2	43.4	18.6	18.9
Access to National Lambda Rail by fall 2009 is essential to our long-term technology needs	17.0	49.3	31.7	15.7	3.5	13.4
We are experiencing major cost over-runs/unexpected costs in our ERP deployment activities	18.8	18.7	18.2	18.9	18.1	20.5
Open Source offers a viable alternative for key campus ERP applications	28.0	29.3	29.5	29.2	28.2	25.4
Open Source will play an increasingly important role in our campus IT strategy	59.3	66.7	63.6	68.9	60.5	42.6
The single most important IT issue confronting this campus over the next 2 or 3 years is:						
Providing online/distance education via the web	7.2	5.3	6.8	10.4	6.2	7.4
Providing adequate user support	9.3	4.0	4.6	10.4	10.7	11.5
Assisting faculty integrate technology into instruction	11.9	13.3	13.6	10.4	13.0	9.8
Financing replacement of aging hardware/software	11.2	12.0	4.6	12.3	12.4	9.8
Moving toward campus-wide wireless networks	1.5	-	-	1.9	1.7	2.5
Integrating academic and administrative IT services	2.3	5.3	2.3	0.9	1.7	2.5
Providing student portal services	4.0	-	9.1	2.8	4.0	5.7
Upgrading/replacing network and data security	20.3	10.7	29.6	21.7	19.8	21.3
Hiring/retaining qualified IT staff	16.7	29.3	9.1	17.0	13.6	16.4
Upgrading/replacing administrative IT/ERP systems	10.0	17.3	15.9	6.6	9.0	8.2
Upgrading/replacing campus network	5.3	2.7	4.6	4.7	7.9	4.1
Upgrading/replacing emergency communications	0.4	-	-	0.9	-	0.8
percentages by campus category.						

CURRENT IT/COMPUTER FACILITIES AND RESOURCES

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
Headcount enrollment on campus as of May 2008	10,256	24,532	11,386	10,621	3,024	11,502
Number of institution owned desktop or notebook computers and workstations						
Desktop/notebook computers	3,768	11,035	8,073	3,153	1,338	1,857
Unix Workstations	232	1,235	408	55	19	18
Number of personally owned desktop and network computers	4,120	13,692	8,002	3,749	1,787	713
Proportion of individuals who own desktop or notebook computers						
Students						
Desktops	40.5	39.0	30.6	48.5	27.3	57.6
Notebooks	55.7	62.5	74.0	50.0	71.1	27.5
Faculty						
Desktops	64.7	71.8	55.9	69.0	55.4	74.2
Notebooks	38.4	42.9	50.4	36.0	40.9	29.6
Total number of desktop computer labs, clusters and classrooms as of May 2008	97	190.9	107.5	112.6	48.2	94.8
How many dedicated to departments or units?	38	84.7	51.8	36.2	17.5	36.9
Total number of desktop computers/workstations in all labs/classrooms/clusters						
Notebook/Desktop Computers	1,100	2,597	1,099	1,164	414	1,170
Unix Workstations	41	172	52	31	13	10
Total number of network servers on your campus	217	727	618	127	71	55
Percentage of campus servers managed by						
Central IT services	85.6	59.5	76.4	86.6	93.6	92.2
Individual departments/labs/units	12.3	41.5	22.5	12.5	3.9	2.9
Percentage of operating systems installed on institutionally-owned computers and servers						
Computers/clients						
Mac	13.8	15.2	16.7	14.0	18.7	4.8
Windows 2000/XP	73.8	61.3	68.3	74.9	70.2	87.2
Windows Vista	6.7	10.4	8.3	5.0	7.5	3.8
Unix	1.8	4.2	2.3	1.7	1.3	0.8
Linux	3.0	5.5	3.8	3.5	2.8	1.2
Network servers						
Mac	3.1	3.2	3.8	3.8	3.6	1.4
Win 2000/03	58.0	44.8	45.7	56.2	59.2	69.8
Solaris/Open Solaris	6.2	12.3	13.2	6.7	4.4	2.0
Unix (non-Solaris)	6.4	11.8	8.1	5.3	6.4	3.6
Linux	15.5	20.7	21.3	16.9	17.3	6.6
Novell	7.4	5.2	2.5	7.9	5.9	12.6
Total number (FTE) of IT help desk/technical support personnel	38.3	130.8	87.1	22.2	12.3	16.1
Ratio user support (enrollment/help desk)	267.8	187.6	130.7	478.4	245.9	714.4
Percentage of faculty with individual/personal Web page	30.5	35.6	38.8	35.9	26.2	27.0
Percentage of classes that use:						
Computer-based classrooms/labs	41.2	34.8	34.4	49.8	38.8	43.8
Computer-based simulations/exercises	19.8	17.3	17.9	20.2	18.9	22.9
Presentation handouts	58.6	53.9	56.7	63.1	56.2	61.6
Electronic mail	83.8	85.4	89.8	88.3	87.9	70.8
Web pages for class materials & resources	46.2	52.3	51.0	53.9	41.3	42.3
Wikis / blogs	6.8	7.3	8.0	6.4	7.6	5.5
Online video resources	10.5	9.1	10.1	10.1	11.7	10.3
Commercial courseware/instructional resources	32.3	28.9	32.4	31.4	34.1	32.6
Internet resources (from off-campus resources/Web sites)	60.8	62.4	65.3	64.3	62.7	52.3
Course management tools for online course resources	53.5	55.6	57.7	55.2	54.4	47.7
"Clickers"/classroom response system	5.7	7.2	6.8	6.8	5.2	4.3
Podcasting	3.4	4.8	3.3	3.7	3.2	2.8
eBooks and electronic textbooks	3.2	2.6	2.9	3.7	3.3	3.3
Lecture capture	3.1	4.6	4.8	2.8	2.1	3.4
percentages by campus category.						

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
ACADEMIC & INSTRUCTIONAL COMPUTING POLICIES AND PROCEDURES & RESOURCES						
Does your campus/institution						
Provide any formal support or assistance (e.g., funding release time technical assistance) to help faculty who wish to develop instructional software/courseware	78.2	86.7	79.5	80.2	69.5	82.8
Provide any formal support or assistance (eg funding release time technical assistance) to help faculty who wish to develop software to assist their research	44.1	62.7	65.9	54.7	36.7	27.0
Have a policy or program for rewarding courseware development or providing incentives for faculty to develop instructional software/courseware	39.2	46.7	31.8	50.9	24.9	46.7
Have a technology resource center that focuses on the instructional use of information technology	82.4	93.3	88.6	89.6	70.1	86.1
Have a formal plan for using the Internet and Web for marketing and promotion to off-campus audiences (eg alumni prospective students)	72.9	82.7	81.8	73.6	78.0	55.7
Have a formal program to recognize and reward the use of information technology as part of the routine faculty review and promotion process	19.1	16.0	9.1	21.7	16.4	24.6
Maintain a library of academic courseware for faculty review and evaluation	27.5	29.3	34.1	28.3	23.2	28.7
Have a formal program to assess the impact of IT on instruction and learning outcomes	23.7	34.7	25.0	23.6	20.9	21.3
Have a formal policy regarding ownership of Web-based curriculum resources and intellectual property developed by faculty	57.4	78.7	75.0	66.0	37.3	59.8
Assess the impact of IT on instructional services and academic programs	43.6	52.0	52.3	45.3	35.6	45.1
Charge students for access to digital content (online reserve readings course packets etc)	5.9	8.0	15.9	6.6	1.7	6.6
Recycle most (60% or more) of the institution's used/obsolete computers	90.0	89.3	88.6	86.8	92.1	90.2
Inform/counsel students about privacy issues related to social networking sites (Facebook MySpace etc)	54.7	68.0	70.5	50.9	66.1	27.0
Maintain a campus page on Facebook	31.9	36.0	37.2	25.5	33.3	30.3
Maintain a campus page on MySpace	16.5	21.3	14.0	11.3	15.8	19.7
Have institutional presence on Second Life	24.9	46.7	30.2	27.4	9.0	30.3
Maintain a public campus Wiki	16.7	28.0	27.9	17.0	14.7	9.0
Have a campus/department license for antiplagiarism software (e.g., Glatt, Plagiarism-Finder, Turnitin)	54.7	62.2	64.3	66.7	43.2	54.1
percentages by campus category.						
Does your institution have a strategic plan for:						
Information technology?						
no	4.0	5.3	4.6	-	6.8	1.6
currently preparing a plan	22.7	24.0	15.9	23.6	27.1	17.2
yes	73.3	70.7	79.6	76.4	66.1	81.2
Instructional technology/instruction integration						
no	21.0	12.0	22.7	20.8	27.7	17.2
currently preparing a plan	29.6	25.3	18.2	29.3	33.3	31.2
yes	49.4	62.7	59.1	50.0	39.0	51.6
Deploying course management tools?						
no	18.6	9.3	13.6	17.9	17.0	29.5
currently preparing a plan	18.0	10.7	11.4	20.8	20.3	18.9
yes	63.5	80.0	75.0	61.3	62.7	51.6
Distance education?						
no	30.3	21.3	36.4	16.0	52.5	14.8
currently preparing a plan	24.2	32.0	13.6	32.1	22.0	19.7
yes	45.5	46.7	50.0	51.9	25.4	65.6
Campus portal services?						
no	24.6	17.3	22.7	21.7	23.7	33.6
currently preparing a plan	27.1	25.3	15.9	27.4	28.3	31.2
yes	48.3	57.3	61.4	50.9	48.0	35.3
Wireless networks?						
no	8.3	4.0	4.6	8.5	6.8	13.9
currently preparing a plan	14.8	13.3	6.8	10.4	15.8	21.3
yes	76.9	82.7	88.6	81.1	77.4	64.8
Web services (integration/deployment)						
no	18.0	13.3	15.9	16.0	18.6	22.1
currently preparing a plan	28.2	30.7	27.3	24.5	27.1	32.0
yes	53.8	56.0	56.8	59.4	54.2	45.9
Network security						
no	6.8	4.0	2.3	3.8	10.2	8.2
currently preparing a plan	21.2	17.3	11.4	18.9	24.9	23.0
yes	72.0	78.7	86.4	77.4	65.0	68.9
IT disaster recovery						
no	3.8	-	-	2.8	5.1	6.6
currently preparing a plan	35.6	33.3	22.7	25.5	48.0	32.8
yes	60.6	66.7	77.3	71.7	46.9	60.7
Administrative systems/ERP upgrade/replacement						
no	14.4	8.0	6.8	8.5	16.4	22.1
currently preparing a plan	15.7	13.3	20.5	13.2	15.3	18.9
yes	69.9	78.7	72.7	78.3	68.4	59.0
Digital content management						
no	37.1	32.0	25.0	25.5	37.3	54.1
currently preparing a plan	37.1	32.0	31.8	47.2	39.0	30.3
yes	25.8	36.0	43.2	27.4	23.7	15.6
Data warehousing						
no	34.3	12.0	20.5	24.5	42.4	49.2
currently preparing a plan	31.3	33.3	25.0	34.0	32.8	27.9
yes	34.5	54.7	54.6	41.5	24.9	23.0
Business intelligence/analytics						
no	48.5	32.0	34.1	47.2	52.0	59.8
currently preparing a plan	32.0	40.0	36.4	34.0	32.8	23.8
yes	19.5	28.0	29.6	18.9	15.3	16.4
Open Source deployment and development						
no	68.9	66.7	52.3	60.4	67.2	85.1
currently preparing a plan	16.7	13.3	29.6	24.5	16.4	8.3
yes	14.4	20.0	18.2	15.1	16.4	6.6
Podcasting course lectures/resources						
no	39.5	30.7	25.0	34.0	41.5	51.6
currently preparing a plan	39.5	40.0	40.9	41.5	42.1	33.6
yes	21.1	29.3	34.1	24.5	16.5	14.8
Emergency communications/notification						
no	3.2	2.7	2.3	2.8	2.8	4.9
currently preparing a plan	26.0	17.3	20.5	21.7	24.3	39.3
yes	70.8	80.0	77.3	75.5	72.9	55.7
Digital preservation/data archiving						
no	35.2	28.0	25.0	32.1	36.2	45.1
currently preparing a plan	41.1	42.7	43.2	47.2	40.1	34.4
yes	23.7	29.3	31.8	20.8	23.7	20.5
percentages by campus category.						

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
Does your institution have a strategic plan for:						
Cellular phones/mobile devices						
no	48.3	48.0	40.9	42.5	50.3	54.1
currently preparing a plan	25.6	28.0	27.3	26.4	26.6	21.3
yes	26.1	24.0	31.8	31.1	23.2	24.6
"Web 2.0" resources and services						
no	56.3	48.0	36.4	57.6	55.9	68.0
currently preparing a plan	34.3	48.0	45.5	33.0	31.1	27.1
yes	9.5	4.0	18.2	9.4	13.0	4.9
Server virtualization						
no	17.7	10.8	4.7	14.3	18.9	28.3
currently preparing a plan	35.5	36.5	51.2	33.3	33.1	35.8
yes	46.8	52.7	44.2	52.4	48.0	35.8
508 accessibility/compliance for Web pages/resources						
no	33.7	20.0	36.4	17.9	53.7	25.4
currently preparing a plan	31.1	33.3	40.9	23.6	30.5	33.6
yes	35.2	46.7	22.7	58.5	15.8	41.0
Email and document archiving to address eDiscovery						
no	41.5	38.7	25.6	34.9	46.3	46.7
currently preparing a plan	41.5	38.7	53.5	47.2	39.6	38.3
yes	17.0	22.7	20.9	17.9	14.1	15.0
Centralized IT service management						
no	22.3	20.3	16.3	20.8	23.2	26.7
currently preparing a plan	31.7	43.2	32.6	33.0	29.4	27.5
yes	46.0	36.5	51.2	46.2	47.5	45.8
percentages by campus category.						
Has your institution established a single product standard for:						
Desktop/notebook computer operating system						
No	75.4	98.7	88.6	88.7	76.8	42.6
Macintosh	0.2	-	-	-	0.6	-
Win 2000/XP	21.6	1.3	9.1	10.4	18.1	53.3
Win Vista	2.7	-	2.3	0.9	4.5	3.3
Linux	0.2	-	-	-	-	0.8
Desktop/notebook product or manufacturer						
No	70.5	92.0	84.1	87.7	72.9	33.6
Apple	0.4	-	-	-	1.1	-
Dell	17.4	5.3	13.6	6.6	14.1	40.2
Gateway	1.9	-	-	-	1.1	6.6
HP/Compaq	5.1	-	-	1.9	5.1	13.1
Lenovo	2.8	1.3	2.3	2.8	3.4	3.3
Other	1.9	1.3	-	0.9	2.3	3.3
Course management system						
No	9.3	9.3	15.9	14.2	6.8	6.6
Angel	7.0	1.3	-	2.8	9.0	13.1
Blackboard	56.8	70.7	68.2	67.0	45.8	51.6
eCollege	1.3	-	-	-	1.7	3.3
Desire2Learn	7.4	5.3	4.6	6.6	-	21.3
Moodle	10.0	4.0	4.6	3.8	23.7	1.6
Sakai	3.8	8.0	4.6	3.8	4.5	-
Other	4.4	1.3	2.3	1.9	8.5	2.5
What academic resources/services are on your campus Web site (or portal)?*						
Undergraduate admissions application	98.5	98.7	95.5	99.1	100.0	96.7
Financial aid application	91.5	93.3	95.5	98.1	89.3	86.9
Current course catalog	99.1	98.7	97.7	100.0	100.0	97.5
Program/major/degree requirements	97.9	97.3	95.5	100.0	98.9	96.7
Course registration	94.3	98.7	93.2	98.1	88.1	98.4
Course add/drop options	89.8	98.7	86.4	98.1	78.5	95.1
E-commerce (fee payments etc)	86.9	98.7	90.9	93.4	74.0	91.8
Online Courses (i.e. full course online)	79.4	96.0	77.3	93.4	51.4	97.5
Student ePortfolios	39.8	52.0	50.0	50.9	35.6	24.6
Library/card catalog	94.7	98.7	100.0	97.2	96.0	86.9
Interlibrary loan services	88.1	93.3	95.5	94.3	91.5	72.1
Journals & reference resources	92.6	97.3	97.7	95.3	94.9	82.8
Course reserves	67.2	80.0	86.4	81.1	73.4	33.6
Student transcripts	87.5	92.0	88.6	92.5	87.0	82.8
Degree audit software	72.5	82.7	77.3	84.0	63.3	68.9
IT support resources	94.5	100.0	100.0	97.2	94.9	86.1
IT training/tutorials	85.4	94.7	81.8	91.5	85.9	75.4
Instructional software	66.7	90.7	84.1	77.4	58.2	48.4
Desktop software (MS Office etc)	52.3	76.0	75.0	60.4	49.2	27.9
Faculty/staff directory	98.5	100.0	100.0	100.0	99.4	95.1
Campus dining services	61.4	77.3	70.5	73.6	65.5	32.0
Campus housing services	58.0	82.7	72.7	82.1	59.3	15.6
Student health services	47.9	69.3	59.1	60.4	48.0	21.3
Student newspaper	72.5	88.0	88.6	85.8	71.8	47.5
Student handbook	92.4	94.7	95.5	95.3	93.2	86.9
Athletic event schedule	89.8	98.7	93.2	95.3	94.9	72.1
Alumni information/services	91.3	97.3	97.7	98.1	96.6	73.0
Press releases/media services	95.5	100.0	97.7	97.2	98.3	86.9
Campus book store	88.4	92.0	88.6	93.4	86.4	86.1
Computer resale services	33.3	56.0	45.5	40.6	32.2	10.7
Personalized student calendar	51.9	58.7	61.4	57.5	52.0	40.2
Campus OneCard account services	44.5	77.3	61.4	60.4	36.7	16.4
Digital Music Service (Napster, Ruckus, etc.)	19.5	46.7	47.7	22.6	12.4	0.8
Percentages by campus category.						

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	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
FUTURE ISSUES AFFECTING CAMPUS COMPUTING						
How important are the following to campus computing and IT planning over the next 2-3 years?						
Operating system/interface/development tools						
Windows XP	5.4	5.0	5.4	5.5	5.3	5.6
Windows Vista	5.5	5.8	6.0	5.6	5.3	5.3
Windows Server	6.2	6.1	6.0	6.3	6.2	6.3
Macintosh OS X (client)	5.2	5.3	5.7	5.7	5.4	4.2
Macintosh OS X (server)	3.8	4.0	4.3	4.3	3.7	3.0
Solaris/Open Solaris	3.3	4.6	4.3	3.6	2.6	2.7
Unix	4.2	5.3	4.8	4.2	3.8	3.9
Linux (client)	3.6	4.6	4.1	3.8	3.3	3.1
Linux (server)	5.2	5.9	6.1	5.4	5.0	4.6
O/S Interoperability	5.3	5.7	5.4	5.5	5.4	5.0
Hardware						
Notebook computers	6.3	6.4	6.7	6.5	6.5	5.8
Macintosh computers	2.7	4.0	3.5	3.0	2.4	1.9
Unix workstations	4.2	4.4	4.2	4.3	4.2	4.0
Tablet computers	4.9	5.4	5.2	5.1	4.8	4.6
PDAs/handheld computers	5.4	5.9	5.7	5.5	5.4	4.8
Cellular/mobile phones	4.9	5.5	5.3	5.2	4.9	4.4
WiFi 3G enabled cell phones	4.9	5.3	5.3	5.0	4.9	4.3
iPods/MP3 players	4.4	4.7	4.6	4.5	4.2	4.3
Instructional applications and resources						
Developing instructional software	4.3	4.2	4.6	4.8	4.1	4.0
Using instructional software in classes	6.1	6.2	6.1	6.3	6.0	6.0
Using instructional software as a supplement to classes	6.2	6.3	6.3	6.3	6.2	6.1
Computer-based classroom presentation facilities	6.5	6.4	6.5	6.6	6.5	6.4
Internet resources for instruction	6.5	6.5	6.6	6.6	6.4	6.5
Web pages for classes	5.8	6.0	6.0	6.0	5.6	5.8
Web-based tutorials	5.6	5.8	5.6	5.8	5.3	5.8
e-Books (e-textbooks)	4.6	4.4	4.5	4.9	4.4	4.9
Course / learning management systems	6.6	6.7	6.7	6.7	6.6	6.4
On-line course evaluation	5.8	6.0	5.9	5.9	5.8	5.8
Classroom "clickers"	4.8	5.4	4.8	4.9	4.5	4.6
Wireless access in campus classrooms	6.0	6.1	6.3	6.1	6.1	5.8
Lecture capture	4.7	5.3	5.2	4.8	4.4	4.7
User support services/campus IT services						
On-line IT training	5.3	5.5	5.2	5.5	5.1	5.4
On-line technical support	5.9	6.0	6.0	6.2	5.8	5.9
Computer resale program	3.0	3.5	3.2	3.1	3.1	2.6
Computer repair services	4.4	4.1	4.3	4.8	4.5	4.1
Help-desk services	6.6	6.6	6.8	6.7	6.6	6.4
Alumni e-mail accounts	4.5	5.1	4.9	4.6	4.8	3.7
Alumni services via the campus Web site	5.2	5.2	5.7	5.3	5.8	4.3
Student ePortfolios	5.1	5.4	5.4	5.5	5.3	4.3
Networking & Internet/Web issues & resources						
Wireless networks (802x stds)	6.6	6.7	6.7	6.7	6.6	6.4
Wi-Max networks	4.5	4.7	4.7	4.8	4.3	4.2
Migrating to 80211n	5.1	5.3	5.4	5.1	5.1	4.7
Voice over IP	5.7	5.8	5.6	5.8	5.4	5.9
Microsoft Exchange	5.2	5.4	5.4	5.2	4.9	5.6
Java	5.3	5.9	5.5	5.5	5.1	5.2
XML (SOAP)	5.2	5.8	5.5	5.3	5.0	5.0
NET (Microsoft)	4.6	4.8	4.2	4.7	4.6	4.7
Open Net / Java Enterprise (Sun)	3.6	4.2	4.0	4.0	3.1	3.6
QuickTime Player	4.8	4.9	4.8	4.8	4.9	4.6
Real Player	4.3	4.4	4.5	4.5	4.3	4.3
Microsoft Media Player	5.0	5.0	4.8	5.1	4.9	4.9
Gigabit Ethernet	6.4	6.5	6.6	6.6	6.4	6.2
Grid computing	3.8	5.4	4.6	4.1	3.2	3.3
Adobe Acrobat	5.6	5.7	5.2	5.8	5.7	5.5
Internet videoconferencing	5.8	6.1	6.0	5.8	5.6	5.8
VPN/Virtual Private Networks	5.9	6.0	5.9	6.1	5.8	5.7
Identity management	6.5	6.7	6.6	6.6	6.4	6.3
Open Source software	4.9	5.1	5.2	5.2	5.1	4.3
Student portal services	6.1	6.3	6.1	6.1	6.2	5.9
SCORM standards	3.8	4.3	3.1	3.9	3.5	3.9
Data encryption	6.1	6.3	6.5	6.3	5.9	6.0
Content management systems	6.0	6.1	6.1	6.2	6.1	5.8
Instant messaging	4.9	5.3	5.1	5.1	4.9	4.7
Wikis	4.7	5.2	4.9	5.0	4.7	4.3
Podcasting	5.1	5.5	5.2	5.3	5.1	4.8
Blogging	4.8	4.9	4.8	5.0	4.8	4.5
Web conferencing	5.3	5.3	5.6	5.4	5.1	5.6
Desktop / Server Virtualization	5.9	5.9	6.0	6.1	5.7	5.8
Administrative software/ERP--Upgrade or replacement						
Accounting / Financial Management	5.7	5.9	6.1	5.7	5.7	5.6
Admissions / Recruitment	6.2	6.2	6.3	6.3	6.1	6.0
Alumni	5.3	5.2	5.8	5.3	5.6	4.6
CRM software	5.0	4.8	5.1	5.0	5.0	4.9
Development	5.2	5.1	5.7	5.4	5.4	4.7
eProcurement / Purchasing	5.2	5.6	5.1	5.4	4.9	5.2
Human Resources	5.6	5.8	5.6	5.7	5.4	5.5
Student Financial Aid Management	5.9	6.0	6.0	6.1	5.7	5.9
Student Info Systems (SIS)	6.0	6.2	6.3	6.3	5.8	5.9
Business Intelligence / Analytics	5.3	5.7	5.4	5.3	5.2	5.2
Vendor Services/Outsourcing						
Data back-up or data storage	3.5	3.2	3.9	3.3	3.5	3.6
ERP services	2.5	2.3	3.1	2.4	2.4	2.8
Instructional technology services	2.4	2.3	2.4	2.4	2.2	2.9
User support	2.5	2.5	3.1	2.2	2.4	2.8
ResNet services	2.4	2.6	2.6	2.4	2.5	1.9
eProcurement	2.9	3.2	3.6	3.0	2.6	2.9
Student/campus portal	3.0	2.6	3.0	2.8	3.0	3.4
Web hosting services	3.3	2.9	3.3	3.0	3.6	3.3
Student email services	4.6	5.3	5.0	4.6	4.3	4.6

mean ratings by campus category   scale from 1="not important" to 7="very important".

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
RATING THE TECHNOLOGY INFRASTRUCTURE						
Computer networks and data communication	6.1	6.1	6.2	6.2	6.0	6.0
Telecommunications and phone system	5.5	5.5	5.7	5.6	5.4	5.5
Wireless networks	5.4	5.5	5.7	5.6	5.5	5.1
User support services	5.6	5.5	5.7	5.6	5.6	5.7
On-line reference resources in campus library/library system	5.9	5.9	5.9	6.1	5.9	5.7
Web resources to support instruction	5.3	5.5	5.3	5.4	5.3	5.3
Campus web site services/student portal	5.0	5.2	5.1	5.1	4.9	5.0
Network security against hackers and virus attacks	5.7	5.6	5.7	5.7	5.7	5.6
Overall assessment of IT security (network attacks, secure data bases, identity mgmt., etc.B488)	5.2	5.2	5.2	5.3	5.1	5.2
Disaster planning	4.5	4.6	4.6	4.7	4.4	4.6
IT training for faculty	4.7	4.8	4.8	4.9	4.5	4.7
IT training for students	4.0	4.2	4.2	3.9	3.9	3.9
Campus portal	4.1	4.5	4.5	4.2	4.1	3.8
Data warehousing	3.7	4.1	4.3	3.8	3.3	3.8
Digital dashboards/ERP analytics	3.0	2.9	3.4	2.9	3.0	3.0
Emergency communications / notification system(s)	5.1	5.4	5.6	5.2	5.2	4.5

mean rating by campus category.   scale from 1="poor" to 7="exxcellent".

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
ADDRESSING BUDGET ISSUES BY:						
Reducing purchases of computer technology						
Doing this already	23.7	24.0	15.9	24.5	20.9	29.5
Beginning in 2008-09	6.4	5.3	4.6	5.7	7.9	5.7
Reviewing for 2008-09	17.2	13.3	22.7	23.6	13.0	18.0
Decided not to do	52.7	57.3	56.8	46.2	58.2	46.7
Charging fees to departments and service units						
Doing this already	25.4	62.7	29.6	23.6	17.0	13.9
Beginning in 2008-09	3.6	2.7	2.3	3.8	4.0	4.1
Reviewing for 2008-09	15.5	14.7	27.3	18.9	13.0	13.1
Decided not to do	55.5	20.0	40.9	53.8	66.1	68.9
Requiring a computer/IT fee for all students						
Doing this already	53.4	70.7	36.4	68.9	36.2	60.7
Beginning in 2008-09	0.4	-	-	-	1.1	-
Reviewing for 2008-09	6.6	13.3	2.3	5.7	4.0	9.0
Decided not to do	39.6	16.0	61.4	25.5	58.8	30.3
Leasing rather than buying hardware						
Doing this already	20.1	22.7	27.3	12.3	25.4	13.9
Beginning in 2008-09	1.9	2.7	2.3	-	3.4	0.8
Reviewing for 2008-09	13.5	21.3	13.6	17.0	11.3	9.0
Decided not to do	64.6	53.3	56.8	70.8	59.9	76.2
Reducing hours in public access facilities						
Doing this already	15.5	17.3	9.1	12.3	14.1	22.1
Beginning in 2008-09	2.7	6.7	4.6	3.8	1.1	0.8
Reviewing for 2008-09	8.9	14.7	6.8	15.1	4.5	7.4
Decided not to do	72.9	61.3	79.6	68.9	80.2	69.7
Reducing services						
Doing this already	20.3	28.0	9.1	18.9	18.6	23.8
Beginning in 2008-09	4.4	6.7	4.6	4.7	4.5	2.5
Reviewing for 2008-09	14.4	12.0	9.1	23.6	12.4	12.3
Decided not to do	61.0	53.3	77.3	52.8	64.4	61.5
Reorganizing operations						
Doing this already	54.2	70.7	56.8	57.6	51.4	44.3
Beginning in 2008-09	8.3	12.0	6.8	14.2	5.7	5.7
Reviewing for 2008-09	19.1	14.7	20.5	24.5	18.6	18.0
Decided not to do	18.4	2.7	15.9	3.8	24.3	32.0
Reducing staff						
Doing this already	16.7	17.3	18.2	18.9	12.4	19.7
Beginning in 2008-09	4.4	9.3	2.3	4.7	4.0	2.5
Reviewing for 2008-09	9.5	20.0	9.1	10.4	7.3	5.7
Decided not to do	69.5	53.3	70.5	66.0	76.3	72.1
Using information technology to reduce instructional costs						
Doing this already	49.1	57.3	40.9	50.9	40.7	57.4
Beginning in 2008-09	3.6	8.0	-	0.9	2.8	5.7
Reviewing for 2008-09	20.1	18.7	11.4	29.3	19.2	18.0
Decided not to do	27.3	16.0	47.7	18.9	37.3	18.9
Making greater use of student assistants for user support services						
Doing this already	78.6	80.0	75.0	88.7	83.1	64.8
Beginning in 2008-09	3.0	4.0	2.3	0.9	3.4	4.1
Reviewing for 2008-09	7.6	8.0	6.8	7.6	6.8	9.0
Decided not to do	10.8	8.0	15.9	2.8	6.8	22.1
Outsourcing computing/IT services to commercial providers						
Doing this already	18.0	17.3	27.3	12.3	17.5	19.7
Beginning in 2008-09	2.8	2.7	2.3	3.8	2.3	3.3
Reviewing for 2008-09	15.5	20.0	18.2	18.9	13.0	12.3
Decided not to do	63.6	60.0	52.3	65.1	67.2	64.8
Outsourcing student portal services to commercial providers						
Doing this already	5.1	1.3	2.3	4.7	4.0	10.7
Beginning in 2008-09	0.4	-	-	-	1.1	-
Reviewing for 2008-09	7.8	6.7	9.1	8.5	8.5	6.6
Decided not to do	86.7	92.0	88.6	86.8	86.4	82.8
Outsourcing user support services to commercial providers						
Doing this already	9.1	6.7	15.9	5.7	6.2	14.8
Beginning in 2008-09	1.1	2.7	-	-	1.7	0.8
Reviewing for 2008-09	12.3	17.3	6.8	11.3	10.7	14.8
Decided not to do	77.5	73.3	77.3	83.0	81.4	69.7
Outsourcing ERP services						
Doing this already	8.8	6.8	4.6	13.2	6.3	11.5
Beginning in 2008-09	0.8	1.4	-	-	1.1	0.8
Reviewing for 2008-09	5.3	8.1	6.8	3.8	5.1	4.9
Decided not to do	85.2	83.8	88.6	83.0	87.5	82.8

percentages by campus category.

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
ADDRESSING BUDGET ISSUES BY: (continued)						
Outsourcing ResNet services						
Doing this already	5.7	6.7	4.6	6.6	5.1	4.9
Beginning in 2008-09	0.4	-	2.3	-	-	0.8
Reviewing for 2008-09	9.3	9.3	2.3	14.2	10.9	5.7
Decided not to do	84.6	84.0	90.9	79.3	84.0	88.5
Outsourcing student email services						
Doing this already	15.4	13.3	18.2	12.3	11.4	24.8
Beginning in 2008-09	11.4	20.0	18.2	8.5	7.4	12.4
Reviewing for 2008-09	32.1	44.0	34.1	36.8	30.1	22.3
Decided not to do	41.1	22.7	29.6	42.5	51.1	40.5
Delaying/deferring ERP deployment/replacement/upgrades						
Doing this already	13.8	9.3	18.2	14.2	15.3	11.5
Beginning in 2008-09	2.5	5.3	2.3	0.9	1.7	3.3
Reviewing for 2008-09	10.2	14.7	11.4	10.4	6.2	13.1
Decided not to do	73.5	70.7	68.2	74.5	76.8	72.1
Deferring/reducing use of consultants on IT projects						
Doing this already	43.0	46.7	40.9	47.2	40.1	41.8
Beginning in 2008-09	3.0	6.7	4.6	2.8	1.7	2.5
Reviewing for 2008-09	14.0	18.7	15.9	21.7	8.5	11.5
Decided not to do	40.0	28.0	38.6	28.3	49.7	44.3
Migrating to Linux/Open Source desktop applications						
Doing this already	9.5	8.0	6.8	9.4	11.3	9.0
Beginning in 2008-09	2.1	2.7	-	3.8	1.7	1.6
Reviewing for 2008-09	15.0	25.3	27.3	17.9	8.5	10.7
Decided not to do	73.5	64.0	65.9	68.9	78.5	78.7
Migrating to Open Source administrative/ERP applications						
Doing this already	6.4	8.0	9.1	5.7	6.2	5.7
Beginning in 2008-09	1.9	1.3	2.3	2.8	1.1	2.5
Reviewing for 2008-09	14.6	20.0	15.9	16.0	13.0	10.7
Decided not to do	77.1	70.7	72.7	75.5	79.7	81.2
Negotiating as a state system/consortium for ERP software and services						
Doing this already	44.2	61.3	18.2	78.1	17.0	54.1
Beginning in 2008-09	1.0	4.0	-	-	0.6	0.8
Reviewing for 2008-09	7.6	6.7	9.1	3.8	8.5	9.0
Decided not to do	47.3	28.0	72.7	18.1	74.0	36.1
Negotiating as a state system/consortium for digital content for the library, curriculum, etc.						
Doing this already	68.3	69.3	43.2	81.9	67.2	66.4
Beginning in 2008-09	1.3	2.7	-	1.0	1.7	0.8
Reviewing for 2008-09	12.0	14.7	13.6	13.3	7.9	13.9
Decided not to do	18.4	13.3	43.2	3.8	23.2	18.9
Negotiating as a state system/consortium for desktop application software						
Doing this already	70.6	74.7	47.7	83.8	65.0	73.8
Beginning in 2008-09	1.1	1.3	-	2.9	1.1	-
Reviewing for 2008-09	10.4	10.7	11.4	10.5	9.6	10.7
Decided not to do	17.8	13.3	40.9	2.9	24.3	15.6
percentages by campus category.						
STRATEGIC, BUDGET AND PERSONNEL ISSUES*						
Assessing the benefits of existing investments in computing and technology resources	6.0	6.1	6.2	6.2	5.9	5.9
Clarifying goals and campus plans for technology resources	6.5	6.5	6.6	6.5	6.5	6.3
Providing incentives and rewards for faculty to support technology integration into the curriculum	4.7	4.9	4.4	5.1	4.5	4.6
Allocating campus funds to support expanded services	5.5	5.7	5.5	5.6	5.6	5.4
Faculty concerns about the benefits of computing in the curriculum	4.8	5.0	4.8	5.1	4.7	4.7
Administrative concerns about the benefits of computing in the curriculum	4.7	4.6	4.6	4.9	4.6	4.6
Establishing/maintaining campus-wide standards for hardware	5.9	5.4	5.6	6.0	5.9	6.3
Establishing/maintaining campus-wide standards for software	6.0	5.7	5.8	6.0	6.0	6.3
Operating a computer resale program for students and faculty	2.6	3.2	2.3	2.7	2.6	2.3
Developing budget mechanisms to replace aging equipment on a routine basis	6.2	6.2	6.0	6.4	6.1	6.3
Using technology-based commercial curriculum products	4.7	4.6	4.8	4.7	4.6	4.9
Using info technology resources to enhance our distance education program	5.3	5.7	5.0	5.9	4.2	6.1
Negotiating site licensing agreements with textbook publishers	4.1	4.0	4.1	4.4	3.6	4.8
Negotiating site licensing agreements with academic publishers	4.3	4.2	4.6	4.4	4.0	4.7
Sharing digital resources with other campuses/institutions	5.1	5.6	5.3	5.4	4.8	4.9
Developing/updating campus policies for Web-based intellectual property	5.3	5.3	5.6	5.4	5.3	5.3
Helping our IT personnel stay current with new technologies	6.4	6.3	6.5	6.5	6.3	6.4
Retaining current IT personnel given off-campus competition	6.0	6.1	6.2	6.0	6.0	6.0
Moving more of our user support services to the Web	5.8	6.0	6.1	6.0	5.7	5.7
Surveying students and faculty about IT issues and services	5.8	5.9	5.8	6.0	5.8	5.6
Assessing the return on investment for IT spending/resources	5.6	5.6	5.6	5.7	5.4	5.6
Researching the total cost of ownership (TCO) for our IT purchases	5.3	5.5	5.0	5.3	5.2	5.4
Using Open Source tools and applications	4.4	4.8	4.4	4.5	4.5	3.7
Supporting PDA/handheld devices	4.8	5.4	5.0	4.9	4.7	4.3
Managing/distributing digital learning resources	5.2	5.6	5.5	5.4	4.9	5.0
Controlling/restricting file sharing of commercial content	5.4	5.6	5.4	5.7	5.3	5.2
Data warehousing	5.2	5.9	5.8	5.4	4.8	5.2
Storage management	5.9	6.2	6.2	6.0	5.7	5.7
Server consolidation	5.9	6.1	6.1	6.2	5.6	5.8
Server virtualization	6.0	6.1	6.3	6.2	5.8	5.8
IT Business Continuity	5.9	6.1	6.3	6.1	5.7	5.9
Identity Management	6.1	6.6	6.3	6.3	5.8	6.0
Business analytics / intelligence	5.1	5.5	5.3	5.2	5.0	5.0
Environmental ("green") issues in the acquisition and disposal of IT hardware	5.3	5.5	5.5	5.2	5.2	5.2
Hosted applications/ Software as a Service (SaaS)	4.1	4.4	4.3	4.0	4.0	3.9
mean ratings by campus category. scale from 1="Not Important" to 7="Very Important".						

CAMPUS COMPUTING 2008

	All Institutions	Universities		4-Year Colleges		2-Year Colleges
		Public	Private	Public	Private	Public
THIS YEAR'S COMPUTING BUDGET COMPARED TO LAST YEAR'S (continued)						
Total computing budget for central IT services						
Reduced >5%	10.0	10.7	2.3	17.0	7.3	9.8
Reduced 3-5%	8.3	20.0	4.6	17.0	2.8	3.3
Reduced 1-3%	12.3	14.7	15.9	10.4	12.4	11.5
No change	29.2	28.0	27.3	29.3	25.4	36.1
Increased 1-3%	24.4	13.3	27.3	15.1	33.3	25.4
Increased 3-5%	9.1	8.0	15.9	5.7	12.4	5.7
Increased >5%	6.6	5.3	6.8	5.7	6.2	8.2
Total academic computing budget						
Reduced >5%	8.1	5.3	-	13.2	7.9	8.2
Reduced 3-5%	6.6	16.0	2.3	14.2	1.7	3.3
Reduced 1-3%	11.7	18.7	9.1	12.3	9.0	12.3
No change	37.3	37.3	40.9	40.6	33.9	39.3
Increased 1-3%	22.9	10.7	31.8	11.3	31.6	23.8
Increased 3-5%	8.3	8.0	11.4	4.7	10.2	8.2
Increased >5%	4.9	4.0	4.6	3.8	5.7	4.9
Total administrative computing budget						
Reduced >5%	9.5	9.3	2.3	16.0	7.3	9.0
Reduced 3-5%	7.8	14.7	4.6	16.0	3.4	4.1
Reduced 1-3%	12.3	17.3	15.9	9.4	10.2	13.9
No change	34.9	28.0	31.8	42.5	32.8	37.7
Increased 1-3%	22.4	14.7	25.0	10.4	32.2	21.3
Increased 3-5%	7.8	5.3	13.6	1.9	10.2	9.0
Increased >5%	5.5	10.7	6.8	3.8	4.0	4.9
Purchases of computers by academic computing units						
Reduced >5%	8.1	8.0	2.3	14.2	5.7	7.4
Reduced 3-5%	4.9	8.0	-	5.7	4.5	4.9
Reduced 1-3%	10.8	16.0	4.6	17.9	6.8	9.8
No change	54.2	53.3	61.4	46.2	57.1	54.9
Increased 1-3%	15.2	13.3	22.7	10.4	17.0	15.6
Increased 3-5%	5.3	-	9.1	4.7	7.3	4.9
Increased >5%	1.5	1.3	-	0.9	1.7	2.5
Purchases of computers by administrative computing units						
Reduced >5%	9.3	10.7	2.3	15.1	5.7	9.8
Reduced 3-5%	4.7	6.7	-	7.6	3.4	4.9
Reduced 1-3%	13.3	16.0	9.1	18.9	11.3	11.5
No change	55.1	56.0	63.6	46.2	57.6	55.7
Increased 1-3%	11.7	9.3	15.9	8.5	14.7	10.7
Increased 3-5%	3.8	-	9.1	1.9	5.1	4.1
Increased >5%	2.1	1.3	-	1.9	2.3	3.3
Purchases of computers by academic departments						
Reduced >5%	9.3	8.0	2.3	14.2	6.8	10.7
Reduced 3-5%	5.1	8.0	2.3	6.6	4.5	4.1
Reduced 1-3%	11.2	16.0	4.6	17.9	6.8	11.5
No change	54.7	53.3	68.2	44.3	59.3	53.3
Increased 1-3%	14.0	13.3	13.6	14.2	15.3	13.1
Increased 3-5%	4.2	-	9.1	2.8	5.1	4.9
Increased >5%	1.5	1.3	-	-	2.3	2.5
All institutional purchases of desktop/notebook computers						
Reduced >5%	7.6	6.7	4.6	11.3	5.1	9.0
Reduced 3-5%	4.9	6.7	-	7.6	3.4	5.7
Reduced 1-3%	10.2	14.7	2.3	15.1	7.9	9.8
No change	45.1	56.0	59.1	44.3	39.0	43.4
Increased 1-3%	22.0	12.0	27.3	13.2	31.6	20.5
Increased 3-5%	5.9	2.7	6.8	3.8	8.5	4.9
Increased >5%	4.4	1.3	-	4.7	4.5	6.6
Network servers						
Reduced >5%	6.3	4.0	2.3	10.4	5.1	6.6
Reduced 3-5%	4.0	6.7	2.3	5.7	1.7	4.9
Reduced 1-3%	9.5	17.3	2.3	11.3	7.3	9.0
No change	43.0	48.0	56.8	38.7	39.0	45.1
Increased 1-3%	25.2	13.3	27.3	26.4	30.5	23.0
Increased 3-5%	8.5	4.0	9.1	4.7	13.6	7.4
Increased >5%	3.6	6.7	-	2.8	2.8	4.1
Server software and related products						
Reduced >5%	4.4	2.7	2.3	9.4	2.8	3.3
Reduced 3-5%	3.2	6.7	-	5.7	1.7	2.5
Reduced 1-3%	8.3	13.3	4.6	7.6	7.9	8.2
No change	49.2	50.7	54.6	43.4	48.0	53.3
Increased 1-3%	23.9	14.7	22.7	30.2	26.0	22.1
Increased 3-5%	7.0	5.3	13.6	2.8	10.2	4.9
Increased >5%	4.0	6.7	2.3	0.9	3.4	5.7
Wireless networks						
Reduced >5%	4.7	4.0	9.1	7.6	3.4	3.3
Reduced 3-5%	2.1	2.7	-	3.8	0.6	3.3
Reduced 1-3%	6.1	5.3	4.6	7.6	4.5	8.2
No change	37.9	34.7	34.1	35.9	38.4	41.8
Increased 1-3%	25.4	28.0	29.6	22.6	22.0	29.5
Increased 3-5%	11.4	14.7	9.1	11.3	14.1	6.6
Increased >5%	12.5	10.7	13.6	11.3	17.0	7.4
User training and support						
Reduced >5%	4.7	10.7	-	9.4	2.3	2.5
Reduced 3-5%	3.0	4.0	2.3	4.7	1.7	3.3
Reduced 1-3%	7.6	10.7	11.4	8.5	5.7	6.6
No change	59.7	56.0	56.8	48.1	68.9	58.2
Increased 1-3%	17.8	17.3	20.5	21.7	14.1	19.7
Increased 3-5%	4.6	1.3	6.8	4.7	4.0	6.6
Increased >5%	2.7	-	2.3	2.8	3.4	3.3

percentages by campus category

CAMPUS COMPUTING 2008

	All Institutions	Universities		4-Year Colleges		2-Year Colleges
		Public	Private	Public	Private	Public
THIIS YEAR'S BUDGET COMPARE TO LAST YEAR'S BUDGET (CONTINUED)						
Professional development for IT personne;						
Reduced >5%	7.0	9.3	-	13.2	4.5	5.7
Reduced 3-5%	4.0	6.7	2.3	5.7	1.1	5.7
Reduced 1-3%	9.9	18.7	15.9	7.6	7.3	8.2
No change	50.4	49.3	54.6	45.3	54.8	47.5
Increased 1-3%	20.6	16.0	20.5	19.8	23.2	20.5
Increased 3-5%	5.7	-	6.8	4.7	6.8	8.2
Increased >5%	2.5	-	-	3.8	2.3	4.1
Campus portal services						
Reduced >5%	2.8	5.3	-	5.7	1.7	1.6
Reduced 3-5%	2.8	8.0	2.3	2.8	-	4.1
Reduced 1-3%	5.5	8.0	4.6	4.7	5.1	5.7
No change	61.6	56.0	65.9	63.2	63.3	58.2
Increased 1-3%	16.1	10.7	18.2	17.0	17.0	17.2
Increased 3-5%	6.4	6.7	6.8	5.7	7.3	5.7
Increased >5%	4.7	5.3	2.3	0.9	5.7	7.4
ERP software and services						
Reduced >5%	2.3	4.0	-	4.7	1.1	1.6
Reduced 3-5%	1.7	2.7	-	3.8	0.6	1.6
Reduced 1-3%	5.7	5.3	6.8	4.7	4.5	8.2
No change	50.6	48.0	43.2	50.0	44.6	62.3
Increased 1-3%	22.7	16.0	29.6	22.6	28.3	17.2
Increased 3-5%	9.3	9.3	6.8	6.6	14.7	4.9
Increased >5%	7.8	14.7	13.6	7.6	6.2	4.1
eCommerce/campus commerce services						
Reduced >5%	2.7	4.0	-	3.8	2.3	2.5
Reduced 3-5%	1.7	5.3	-	1.9	0.6	1.6
Reduced 1-3%	6.1	9.3	4.6	6.6	4.5	6.6
No change	70.1	62.7	68.2	73.6	71.2	69.7
Increased 1-3%	13.5	13.3	18.2	10.4	14.7	13.1
Increased 3-5%	3.0	2.7	6.8	0.9	4.5	1.6
Increased >5%	3.0	2.7	2.3	2.8	2.3	4.9
External service providers						
Reduced >5%	4.0	8.0	2.3	4.7	2.8	3.3
Reduced 3-5%	3.8	6.7	-	3.8	4.0	3.3
Reduced 1-3%	7.6	6.7	9.1	7.6	6.2	9.8
No change	63.3	68.0	63.6	69.8	58.2	61.5
Increased 1-3%	14.0	5.3	18.2	9.4	18.1	15.6
Increased 3-5%	4.7	4.0	6.8	0.9	7.9	3.3
Increased >5%	2.7	1.3	-	3.8	2.8	3.3
Security issues						
Reduced >5%	2.1	4.0	2.3	1.9	1.7	1.6
Reduced 3-5%	1.5	4.0	-	1.9	-	2.5
Reduced 1-3%	1.9	1.3	2.3	0.9	1.7	3.3
No change	38.3	26.7	34.1	35.9	42.4	42.6
Increased 1-3%	31.4	38.7	22.7	29.3	31.6	32.0
Increased 3-5%	13.8	14.7	13.6	15.1	13.6	13.1
Increased >5%	11.0	10.7	25.0	15.1	9.0	4.9
Identity management						
Reduced >5%	2.7	4.0	-	4.7	1.7	2.5
Reduced 3-5%	1.1	1.3	-	1.9	0.6	1.6
Reduced 1-3%	3.0	8.0	4.6	1.9	0.6	4.1
No change	51.3	30.7	47.7	41.5	63.8	54.1
Increased 1-3%	26.9	34.7	22.7	34.0	20.9	27.1
Increased 3-5%	8.1	10.7	6.8	0.9	11.3	9.0
Increased >5%	6.8	10.7	18.2	15.1	1.1	1.6
Consultants for IT projects and services						
Reduced >5%	7.8	17.3	9.1	9.4	3.4	5.7
Reduced 3-5%	5.3	4.0	-	10.4	5.7	3.3
Reduced 1-3%	11.7	14.7	15.9	9.4	10.2	13.1
No change	50.0	37.3	47.7	47.2	54.2	54.9
Increased 1-3%	15.7	14.7	15.9	15.1	16.4	15.6
Increased 3-5%	5.3	5.3	4.6	3.8	8.5	2.5
Increased >5%	4.2	6.7	6.8	4.7	1.7	4.9
Data warehousing						
Reduced >5%	2.5	4.0	-	3.8	1.7	2.5
Reduced 3-5%	1.5	-	-	2.8	1.7	1.6
Reduced 1-3%	3.8	6.7	4.6	3.8	1.1	5.7
No change	66.1	57.3	56.8	58.5	77.4	64.8
Increased 1-3%	15.2	17.3	27.3	19.8	8.5	15.6
Increased 3-5%	6.6	6.7	6.8	6.6	7.3	5.7
Increased >5%	4.4	8.0	4.6	4.7	2.3	4.1
CRM services/software						
Reduced >5%	2.8	6.7	-	4.7	1.1	2.5
Reduced 3-5%	2.8	1.3	-	6.6	2.3	2.5
Reduced 1-3%	4.4	5.3	2.3	4.7	4.0	4.9
No change	75.4	70.7	68.2	69.8	80.2	77.9
Increased 1-3%	8.9	13.3	22.7	7.6	6.8	5.7
Increased 3-5%	2.1	-	6.8	0.9	1.7	3.3
Increased >5%	3.6	2.7	-	5.7	4.0	3.3
Supporting Open Source projects/applications						
Reduced >5%	3.6	5.3	-	3.8	2.3	5.7
Reduced 3-5%	4.0	4.0	2.3	4.7	4.0	3.3
Reduced 1-3%	5.5	2.7	4.6	5.7	4.5	9.0
No change	69.3	68.0	68.2	70.8	67.8	71.3
Increased 1-3%	12.9	16.0	15.9	11.3	16.4	6.6
Increased 3-5%	3.0	-	9.1	3.8	3.4	1.6
Increased >5%	1.7	4.0	-	-	1.7	2.5
Business Continuity						
Reduced >5%	2.1	2.7	-	3.8	2.3	0.8
Reduced 3-5%	1.7	-	-	1.9	2.8	1.6
Reduced 1-3%	3.2	6.7	4.6	1.9	1.1	4.9
No change	57.6	60.0	43.2	50.0	61.6	61.5
Increased 1-3%	21.0	20.0	27.3	24.5	18.6	19.7
Increased 3-5%	8.1	4.0	13.6	11.3	7.9	6.6
Increased >5%	6.3	6.7	11.4	6.6	5.7	4.9

percentages by campus category

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
THIIS YEAR'S BUDGET COMPARE TO LAST YEAR'S BUDGET (CONTINUED)						
Business analytics/Business Intelligence products						
Reduced >5%	2.8	5.3	-	1.9	2.8	3.3
Reduced 3-5%	3.0	1.3	-	4.7	4.0	1.6
Reduced 1-3%	4.0	6.7	4.6	3.8	2.8	4.1
No change	60.8	58.7	50.0	55.7	67.2	61.5
Increased 1-3%	17.6	13.3	25.0	22.6	14.1	18.9
Increased 3-5%	6.1	2.7	11.4	6.6	5.1	7.4
Increased >5%	5.7	12.0	9.1	4.7	4.0	3.3
Emergency communication/notification services						
Reduced >5%	1.5	1.3	-	1.9	1.7	1.7
Reduced 3-5%	1.1	1.3	-	0.9	1.1	1.7
Reduced 1-3%	1.5	1.3	2.3	-	1.1	3.3
No change	39.4	48.0	34.1	39.6	41.5	31.4
Increased 1-3%	29.3	20.0	36.4	30.2	29.6	32.2
Increased 3-5%	11.2	12.0	4.6	11.3	11.4	13.2
Increased >5%	16.0	16.0	22.7	16.0	13.6	16.5
percentages by campus category						
THE TECHNOLOGY BUDGET						
Percentage institutions experiencing computing budget cut, 2007-08	13.1	21.3	4.5	12.3	10.7	15.6
Percentage of budget that was cut	0.9	1.1	0.1	1.1	0.9	1.0
Total (average) central computing budget 2008-09	$ 6,847,010	$ 18,992,927	$ 16,362,344	$ 4,622,046	$ 3,190,947	$ 3,376,015
Percent of budget allocated to:						
Hardware	19.3	14.1	16.7	16.4	21.9	22.3
Software	13.5	10.8	11.7	13.1	14.8	14.5
Personnel	50.1	57.1	53.0	55.7	44.4	48.5
Content licenses	5.8	3.4	3.6	5.2	6.5	7.5
User support	15.3	16.6	17.4	15.2	13.9	15.9
Network service/support	13.8	15.9	11.5	13.9	14.1	12.9
Note: numbers may not equal 100% because of overlapping budget categories						
Central computing/IT budget as an estimated percentage of total campus IT spending	58.2	42.1	53.0	60.3	66.3	56.0
Total computing/IT expenditure as an estimated percentage of total campus spending	6.4	5.1	4.5	6.2	6.3	8.0
As of September 2008, will your institution have an operational campus-wide (emergency) notification system?						
No	5.5	-	2.3	2.8	5.1	13.1
If yes, what elements of the notification system are functional as of September 2008?						
Sirens	34.8	52.0	31.8	38.7	31.1	27.9
PA system	37.1	46.7	45.5	35.8	27.7	42.6
Electronic signs / displays	22.9	32.0	18.2	25.5	11.9	33.6
Notice on campus web site / portal	81.1	92.0	90.9	84.9	78.5	71.3
Email	86.2	98.7	97.7	90.6	88.1	68.0
SMS / text messaging	75.6	86.7	93.2	79.2	79.1	54.1
RSS	10.8	24.0	11.4	11.3	10.2	3.3
Voice mail to campus phones (offices / dorms)	65.5	73.3	84.1	71.7	68.4	45.9
Voice mail to off-campus land lines (homes / apartments)	41.1	44.0	61.4	49.1	39.0	28.7
Voice mail to mobile phones	48.5	52.0	68.2	56.6	49.7	31.1
Campus policy for emergency notification services is "opt in" (requires registration)	76.8	83.8	75.0	75.3	72.0	81.8
Current replacement cycle for desktop/notebook computers (years)						
Student labs						
1 year	0.6	-	-	-	1.1	0.8
2 years	4.7	1.3	2.3	1.9	7.9	4.9
3 years	46.6	60.0	54.6	43.4	48.6	36.1
4 years	39.0	30.7	40.9	43.4	35.0	45.1
5 years	9.1	8.0	2.3	11.3	7.3	13.1
Faculty offices						
1 year	0.2	-	-	-	-	0.8
2 years	1.3	-	4.6	0.9	1.1	1.6
3 years	27.8	29.3	43.2	28.3	29.4	18.9
4 years	55.5	56.0	43.2	55.7	56.5	57.4
5 years	15.2	14.7	9.1	15.1	13.0	21.3
Administrative offices						
1 year	0.2	-	-	-	-	0.8
2 years	0.6	1.3	-	-	0.6	0.8
3 years	22.5	29.3	31.8	22.6	21.5	16.4
4 years	57.4	60.0	59.1	61.3	55.9	53.3
5 years	19.3	9.3	9.1	16.0	22.0	28.7
Means and percentages by campus category.						
WEB AND NETWORKING ISSUES						
How does your institution address the problem of spam:						
No institutional effort/policy	0.9	1.3	-	-	1.7	0.8
Recommend end-user filters	61.7	78.7	68.2	67.9	63.3	42.6
Deploy server filters	97.0	100.0	100.0	97.2	97.2	93.4
Use DNS blacklists	72.5	81.3	65.9	76.4	70.1	70.5
Other	28.6	30.7	27.3	33.0	26.6	27.0
Does your institution have a financial plan to upgrade/enhance/replace the campus network						
No current plan/policy	10.0	2.7	4.6	6.6	11.3	17.2
Under discussion/development	32.6	41.3	25.0	33.0	28.8	34.4
Currently funded network replacement/upgrade plan	57.4	56.0	70.5	60.4	59.9	48.4
How important are the following issues on your campus?*						
Supporting instructional labs and clusters	6.1	5.9	5.9	6.3	6.0	6.2
Creating Web pages for department use and course resources	5.1	5.0	4.8	5.4	5.1	5.0
Digital image libraries/archives	4.9	5.3	5.5	5.0	5.0	4.3
Disaster recovery	6.1	6.2	6.4	6.3	6.0	5.9
Virtual private networks (VPN)	5.6	6.0	5.7	5.9	5.4	5.2
Network security	6.7	6.8	6.9	6.8	6.6	6.6
Gigabit ethernet	5.9	6.3	6.1	6.2	5.8	5.6
Grid computing	3.1	4.6	3.8	3.1	2.7	2.7
Electronic commerce	4.7	5.0	5.3	4.6	4.5	4.6
Wireless networks (802xx stds)	6.2	6.5	6.5	6.4	6.3	5.7
Wi-Max wireless networks	3.8	4.2	3.8	4.1	3.6	3.6
Making campus networks accessible to PDA/handheld devices	4.4	5.0	4.9	4.6	4.4	3.9
Making campus networks accessible to 3G phones	3.9	4.3	4.9	4.1	3.9	3.3
Guest access/services on the campus network	4.7	5.0	5.1	4.8	4.5	4.3
Data Encryption	5.7	6.0	6.2	5.9	5.4	5.6
Replacement cycle for network infrastructure	5.9	6.1	6.0	6.1	5.8	5.8
Identity management	5.9	6.3	6.2	6.2	5.5	5.8
means by campus category. scale: 1=not important; 7=very important						

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
How important are the following issues on your campus?* (continued)						
Internet2	3.9	5.7	4.9	4.0	3.2	3.3
National Lambda Rail	2.9	4.6	3.5	2.8	2.3	2.5
Spyware/malware	5.7	5.8	5.7	5.9	5.5	5.6
IT Disaster Communications Capacity	5.8	6.1	6.2	6.1	5.5	5.6
P-20 Education Continuum/Services	3.1	3.6	3.1	3.1	2.6	3.3
Telepresence capacity	3.4	3.8	3.7	3.3	3.0	3.6
means by campus category. scale: 1=not important; 7=very important)						
How well developed are network connections and the instructional infrastructure?						
Percentage of classrooms connected to the campus network/have Internet access	94.3	90.5	96.4	95.6	94.9	93.8
Percentage of classrooms with fixed computer projection capacity	69.6	61.2	73.2	70.2	72.8	68.3
Percentage of campus covered/served by wireless network access	69.5	67.9	74.8	74.5	70.6	62.4
Percentage of classrooms covered/served by wireless network access/services	67.6	65.8	76.0	73.9	70.4	56.1
Current transmission capacity of your campus network						
High speed video						
Functional now	68.5	92.0	84.1	78.3	49.7	68.6
Coming A/Y 2008-09	3.4	1.3	4.6	3.8	2.8	5.0
Scheduled for A/Y 2008-09	7.8	-	4.6	8.5	12.4	6.6
Not applicable	20.3	6.7	6.8	9.4	35.0	19.8
ATM						
Functional now	15.9	20.0	9.1	18.9	6.8	27.1
Coming A/Y 2008-09	0.4	-	-	0.9	0.6	-
Scheduled for A/Y 2008-09	1.0	-	-	-	1.1	2.5
Not applicable	82.7	80.0	90.9	80.2	91.5	70.5
Local area wireless networks						
Functional now	94.9	97.3	97.7	96.2	93.2	93.4
Coming A/Y 2008-09	1.0	-	-	0.9	1.7	0.8
Scheduled for A/Y 2008-09	0.8	-	-	-	1.1	1.6
Not applicable	3.4	2.7	2.3	2.8	4.0	4.1
Full campus wireless networks						
Functional now	51.1	47.3	65.9	53.8	50.9	45.5
Coming A/Y 2008-09	9.9	6.8	6.8	13.2	8.5	12.4
Scheduled for A/Y 2008-09	24.0	28.4	20.5	21.7	23.2	25.6
Not applicable	15.0	17.6	6.8	11.3	17.5	16.5
Gigabit Ethernet						
Functional now	85.0	90.7	88.6	94.3	81.8	76.2
Coming A/Y 2008-09	4.2	5.3	6.8	1.9	4.0	4.9
Scheduled for A/Y 2008-09	6.1	2.7	2.3	1.9	7.4	11.5
Not applicable	4.7	1.3	2.3	1.9	6.8	7.4
10 Gigabit Ethernet						
Functional now	25.6	52.0	47.7	24.5	15.8	17.4
Coming A/Y 2008-09	6.3	9.3	6.8	4.7	6.2	5.0
Scheduled for A/Y 2008-09	23.7	21.3	22.7	25.5	23.2	24.8
Not applicable	44.4	17.3	22.7	45.3	54.8	52.9
Voice over IP						
Functional now	50.0	62.2	50.0	51.9	39.2	57.4
Coming A/Y 2008-09	8.9	8.1	6.8	13.2	7.4	9.0
Scheduled for A/Y 2008-09	16.5	12.2	13.6	15.1	20.5	14.8
Not applicable	24.5	17.6	29.6	19.8	33.0	18.9
Internet2						
Functional now	45.9	96.0	77.3	62.3	23.9	22.1
Coming A/Y 2008-09	3.2	1.3	-	4.7	4.0	3.3
Scheduled for A/Y 2008-09	4.6	-	2.3	1.9	6.8	7.4
Not applicable	46.3	2.7	20.5	31.1	65.3	67.2
National LambdaRail						
Functional now	13.5	46.7	25.0	16.0	2.9	1.6
Coming A/Y 2008-09	2.9	8.0	4.6	2.8	0.6	2.5
Scheduled for A/Y 2008-09	4.6	9.3	2.3	5.7	2.9	4.1
Not applicable	79.1	36.0	68.2	75.5	93.7	91.8
Number of "plug & play" ports on campus for mobile computer users	647.0	902.3	2,086.5	697.9	516.9	140.5
Number of wireless nodes on the campus network	360.4	860.6	1,233.4	259.0	194.2	80.1
Does your institution limit the size of email documents/attachments	80.7	86.7	86.4	79.2	82.5	73.0
Maximum file size (Mbytes)	26.1	50.0	22.6	28.1	19.8	20.3
Storage capacity for email						
Student maximum file size (Mbytes)	1,877.5	2,371.7	5,490.4	783.7	1,630.1	1,679.2
Faculty maximum file size (Mbytes)	3,076.5	2,280.8	5,703.8	3,049.7	2,895.6	3,032.4
Does your institution limit the size of student web sites	53.2	74.7	72.7	63.8	52.6	24.4
Maximum size (Mbytes)	179	276	304	223	169	18
Is your institution reviewing or converting to outsourced/hosted applications						
Hosted / outsourced email						
Students						
No	29.3	18.7	20.9	33.0	33.5	28.7
Under review	28.3	30.7	37.2	25.5	22.7	35.3
Converting to / now using	42.4	50.7	41.9	41.5	43.8	36.1
Faculty						
No	81.8	81.1	74.4	81.1	80.1	88.1
Under review	3.5	4.1	2.3	2.8	5.1	1.7
Converting to / now using	14.8	14.9	23.3	16.0	14.8	10.2
Provider						
Google	56.5	47.6	75.0	54.6	57.1	53.4
Microsoft	38.8	40.5	21.9	40.0	38.5	45.2
Zimbra	4.8	11.9	3.1	5.5	4.4	1.4
Hosted / outsourced "office" applications						
No	86.1	88.0	74.4	84.9	85.8	90.2
Under review	12.2	8.0	25.6	13.2	12.5	9.0
Converting to / now using	1.7	4.0	-	1.9	1.7	0.8
Product						
Google Applications	70.0	62.5	90.0	46.2	73.7	80.0
Microsoft Office Live	30.0	37.5	10.0	53.9	26.3	20.0

Mean ratings and percentages by campus category.
*Scale from 1="Not Important" to 7="Very Important".
+Columns may not total 100% since responses are not mutually exclusive.

CAMPUS COMPUTING 2008

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
ORGANIZATION, PLANNING AND IMPACT ISSUES						
Is your campus part of a multicampus system with shared computing resources?	52.1	66.7	36.4	74.5	26.0	68.0
Academic and administrative computing are:						
Separate units	25.0	33.3	36.4	28.3	20.3	20.5
One single unit	75.0	66.7	63.6	71.7	79.7	79.5
Has your institution reorganized IS units in the past 2 years?*						
Academic computing	37.9	56.0	31.8	42.5	31.6	33.6
Administrative computing	33.0	53.3	40.9	37.7	24.9	25.4
Libraries	15.9	14.7	15.9	21.7	14.7	13.9
Telecom	28.8	40.0	27.3	31.1	26.0	25.4
Do you anticipate a reorganization of IS in the next 2 years?*						
Academic computing	27.3	41.3	29.5	29.2	20.9	26.2
Administrative computing	25.8	40.0	34.1	21.7	23.2	22.1
Libraries	15.0	13.3	9.1	18.9	15.3	14.8
Telecom	25.0	32.0	25.0	25.5	22.0	25.4
The heads of the academic and administrative units report to:						
Academic computing						
President	5.9	1.3	-	6.6	2.8	13.9
Provost	12.3	16.0	6.8	16.0	13.0	8.2
CIO or CTO	65.0	76.0	75.0	67.9	68.9	47.5
Other vice provost/vice president	13.1	4.0	11.4	6.6	13.6	23.8
Dean	3.8	2.7	6.8	2.8	1.7	6.6
Administrative computing						
President	6.3	1.3	-	5.7	3.4	15.6
Provost	5.5	6.7	2.3	9.4	4.5	4.1
CIO or CTO	70.3	86.7	79.6	71.7	71.8	54.9
Other vice provost/vice president	17.1	5.3	18.2	13.2	20.3	22.1
Dean	1.0	-	-	-	-	3.3
Libraries						
President	1.1	-	-	0.9	1.1	2.5
Provost	59.2	81.3	72.7	69.8	59.1	32.8
CIO or CTO	12.1	6.7	9.1	9.4	17.1	12.3
Other vice provost/vice president	11.6	2.7	6.8	6.6	14.2	18.9
Dean	15.9	9.3	11.4	13.2	8.5	33.6
Does institution have a chief information/technology officer?						
No	11.9	1.3	9.1	11.3	16.4	13.9
Currently under discussion	2.5	1.3	-	4.7	3.4	0.8
Yes	85.6	97.3	90.9	84.0	80.2	85.3
What academic and operational units report to the CIO/CTO?*						
Academic computing	85.0	86.7	83.7	89.9	88.1	75.2
Administrative computing	92.1	97.3	93.0	91.9	90.6	90.3
Libraries	13.6	4.0	11.6	12.1	18.8	15.0
Media center	58.3	57.3	60.5	57.6	64.4	50.4
Telecommunications	83.8	92.0	95.3	82.8	75.6	85.8
The CIO reports to:						
President	35.0	26.7	19.1	42.4	31.1	45.1
Provost/vice president for academic affairs	27.5	41.3	33.3	37.4	24.8	11.5
CFO/vice president for business/admin affairs	29.4	22.7	35.7	17.2	35.4	33.6
Other	8.1	9.3	11.9	3.0	8.7	9.7
Is the CIO (or senior institutional computing/IT officer) a member of the president's cabinet or executive committee?	52.4	52.0	45.2	62.6	44.7	57.5
Does your institution have a board / trustee committee on computing / information technology?						
No	71.9	68.0	79.1	64.2	74.0	74.6
Under discussion	5.9	2.7	4.7	6.6	7.9	4.9
To begin in A/Y 2008-09	1.0	2.7	-	1.9	0.6	-
Yes, current board committee on computing / IT issues	21.3	26.7	16.3	27.4	17.5	20.5
Which unit provides tech support for most departmental computer labs?						
Individual department	8.7	24.0	25.0	13.2	1.1	0.8
Central IT service unit	64.0	16.0	36.4	58.5	78.0	87.7
Both	27.3	60.0	38.6	28.3	20.9	11.5
How does your institution deal with the "life cycle" of desktop computers for faculty, classrooms, clusters, and labs?						
One time allocation	8.5	16.0	6.8	10.4	3.4	10.7
Developing budget	22.0	36.0	20.5	29.3	13.6	20.5
Have budget	69.5	48.0	72.7	60.4	83.1	68.9
What types of security incidents did your campus experience in the past year?						
Theft of computer(s) containing confidential data files	22.2	41.3	43.2	18.9	14.1	18.0
Hack/attack on the campus network	46.2	73.3	54.5	52.8	36.2	36.9
Hack/attack on student/personnel/alumni data files	6.4	20.0	18.2	4.7	1.1	3.3
Hack/attack on administrative/financial files	5.5	16.0	13.6	2.8	2.3	3.3
Hack/attack on research data files	3.8	13.3	13.6	1.9	0.6	0.8
Other attack on institutional data files	8.5	26.7	18.2	3.8	4.5	4.1
Identity management issues	25.6	41.3	34.1	32.1	18.6	18.0
Major computer virus infestation	11.4	13.3	2.3	15.1	12.4	9.0
Major spyware infestation	13.1	16.0	9.1	13.2	13.0	13.1
Student security "incident" related to social networking sites	12.9	14.7	11.4	16.0	12.4	9.8
Exposure/loss of sensitive data in distributed environment (server not managed by central services)	16.9	56.0	31.8	18.9	5.6	2.5
Intentional employee transgressions affecting IT security	8.9	14.7	9.1	10.4	3.4	12.3
means and percentages by campus category.						
*Columns may not total 100% since responses are not mutually exclusive.						
How concerned are you about the following security issues for your institution in the coming year?						
Theft of computer(s) containing confidential data files	4.2	4.4	4.5	4.2	4.1	4.0
Hack/attack on the campus network	4.0	4.1	4.1	4.2	4.0	3.9
Hack/attack on student/personnel/alumni data files	3.8	4.0	4.3	4.0	3.7	3.7
Hack/attack on administrative/financial files	3.9	4.0	4.2	4.0	3.7	3.7
Hack/attack on research data files	3.1	3.8	3.5	3.4	2.8	2.7
Other attack on institutional data files	3.6	3.9	3.8	3.9	3.4	3.5
Identity management issues	4.0	4.1	4.0	4.2	3.8	4.0
Major computer virus infestation	3.4	3.3	3.4	3.6	3.3	3.5
Major spyware infestation	3.4	3.4	3.4	3.6	3.4	3.4
Student security "incident" related to social networking sites	3.1	3.2	3.3	3.2	3.2	2.9
Exposure/loss of sensitive data in distributed environment (server not managed by central services)	3.6	4.5	4.3	4.0	3.1	3.2
Intentional employee transgressions affecting IT security	3.2	3.2	3.4	3.4	3.0	3.3
menans by campus category; scale score 1=not important; 7=very important						

	All Institutions	Universities Public	Universities Private	4-Year Colleges Public	4-Year Colleges Private	2-Year Colleges Public
How would you characterize the campus strategy on Open Source tools for central IT infrastructure services?						
None: little if any interest in or deployment of Open Source tools in Central IT Services	10.4	2.7	6.8	8.5	11.9	15.6
Observing: Watching other institution with interest, but no active deployment or development	14.4	12.0	6.8	12.3	14.1	21.3
Sampling: some Open Source tool activity, primarily backroom/infrastructure tools	40.3	29.3	43.2	44.3	37.9	45.1
Operational: significant Open Source deployment, focused on key operations	14.8	18.7	13.6	16.0	14.1	13.1
Mission critical: using a number of Open Source academic, administrative, and research resources for "mission critical" central IT operations	17.1	34.7	22.7	17.0	17.0	4.9
Contributing: strong support for Open Source tools plus a commitment and campus strategy to develop new/enhance current Open Source tools for central IT operations	3.0	2.7	6.8	1.9	5.1	-
How would you characterize your campus strategy on/engagement with Open Source applications?						
None: little if any interest in or deployment of Open Source tools in Central IT Services	13.6	8.0	11.4	7.6	15.3	20.5
Observing: Watching other institution with interest, but no active deployment or development	33.7	29.3	36.4	37.7	26.6	41.8
Sampling: some Open Source tool activity, primarily backroom/infrastructure tools	26.9	25.3	22.7	34.0	20.9	32.0
Operational: significant Open Source deployment, focused on key operations	13.5	18.7	11.4	13.2	18.1	4.9
Mission critical: using a number of Open Source academic, administrative, and research resources for "mission critical" central IT operations	7.2	6.7	6.8	3.8	14.1	0.8
Contributing: strong support for Open Source tools plus a commitment and campus strategy to develop new/enhance current Open Source tools for central IT operations	5.1	12.0	11.4	3.8	5.1	-
Open Source projects and personnel at your institution						
Current/active Open Source support/development projects in central IT services	2.8	3.9	6.1	3.3	2.4	1.0
FTE personnel allocated to Open Source support or development activities in central IT services	1.5	4.0	3.2	1.2	1.0	0.4
Looking ahead, what's the likelihood that your institution will migrate (or has already migrated) to one or more Software as a Service (SAAS) or Open Source ERP modules by fall 2013?						
Average score*						
Software as a Service (SAAS) Apps						
Course / Learning Management System	3.1	2.4	3.7	3.2	3.0	3.5
Content Mangement System	2.8	2.3	3.1	2.8	2.7	3.0
Research Management System	2.0	2.2	2.4	2.0	1.9	1.8
Development System	1.9	1.9	2.0	1.9	1.8	2.0
Financial System	1.9	1.8	1.9	1.9	1.7	2.2
HR System	2.0	1.9	2.1	2.0	1.9	2.4
Portal	2.4	2.2	2.2	2.2	2.5	2.7
Student Information System	1.9	1.8	2.0	2.0	1.9	2.1
Student ePortfolio System	2.8	2.4	3.3	3.0	3.0	2.6
Open Source ERP Apps						
Course / Learning Management System	3.5	3.6	3.9	3.7	3.8	2.7
Content Mangement System	2.9	2.9	3.2	3.4	2.9	2.4
Research Management System	2.1	2.7	2.7	2.3	1.9	1.8
Development System	1.8	2.1	1.8	1.8	1.7	1.8
Financial System	1.7	2.2	1.9	1.6	1.5	1.7
HR System	1.7	2.0	1.8	1.5	1.5	1.7
Portal	2.6	2.8	2.8	2.5	2.6	2.6
Student Information System	1.7	2.0	2.3	1.6	1.6	1.6
Student ePortfolio System	2.7	3.3	3.1	2.7	2.9	2.2
Percent with high level of migrating (scale score 6 or 7 on a 1-7 scale)						
Software as a Service (SAAS) Apps						
Course / Learning Management System	18.0	4.1	22.0	17.3	16.7	28.6
Content Mangement System	12.2	5.4	19.0	9.6	12.0	16.8
Research Management System	2.3	2.7	4.9	2.9	1.1	2.5
Development System	3.1	5.4	2.4	2.9	1.7	4.2
Financial System	6.2	2.7	7.1	7.7	2.9	11.8
HR System	8.1	4.1	7.1	8.7	5.7	14.3
Portal	8.3	6.8	2.4	7.7	7.4	13.4
Student Information System	5.4	2.7	7.1	5.8	4.0	8.4
Student ePortfolio System	11.1	2.7	20.0	14.4	12.1	8.4
Open Source ERP Apps						
Course / Learning Management System	24.4	23.0	23.8	21.9	33.1	15.8
Content Mangement System	15.3	12.2	14.6	21.9	16.1	10.8
Research Management System	4.7	10.8	2.4	5.7	2.3	4.2
Development System	2.3	4.1	-	0.9	2.3	3.4
Financial System	4.4	12.2	4.9	4.8	1.2	4.2
HR System	3.3	9.5	2.4	2.9	0.6	4.2
Portal	12.9	14.9	9.8	15.1	10.9	14.2
Student Information System	3.3	5.4	9.5	2.9	1.1	3.4
Student ePortfolio System	10.6	14.9	9.8	11.3	10.3	8.4
means and percentages by campus category. * scale score: =1 not likely; 7=very likely						
How does your institution address the problem of P2P digital piracy on campus computer networks?						
Mandatory user education program	17.5	32.0	20.5	17.9	18.6	5.0
Sanction students for copyright, P2P or DCMA violations	56.9	80.0	77.3	64.2	53.7	33.9
Students can lose campus network/email access or privileges for P2P violations	86.9	90.7	90.9	94.3	87.6	76.0
Student financial penalty or fine paid to college/university for P2P violations	8.9	18.7	18.2	9.4	6.2	3.3
The Higher Education Act passed by the Congress and signed by the president in August 2008 imposes new requirements on colleges and universities to address illegal P2P filesharing. What's the status of compliance with these mandates at your institution as of fall 2008?						
My institution has "developed plans to effectively combat the unauthorized distribution of copyrighted material"						
Doing this already	56.5	80.0	66.7	62.3	57.4	32.2
Beginning in 2008-09	7.6	2.7	7.1	5.7	6.8	13.2
Reviewing for 2008-09	33.6	17.3	23.8	31.1	32.4	51.2
Previously decided not to do this	2.3	-	2.4	0.9	3.4	3.3
Current campus plans include "the use of a variety of technology-based deterrents"						
Doing this already	31.5	46.7	23.8	33.3	36.0	17.7
Beginning in 2008-09	4.8	2.7	4.8	4.8	2.9	8.4
Reviewing for 2008-09	44.8	30.7	45.2	48.6	40.6	56.3
Previously decided not to do this	18.9	20.0	26.2	13.3	20.6	17.7
My institution currently "offers alternatives to illegal downloading or peer-to-peer distribution of intellectual property"						
Doing this already	22.8	49.3	44.2	26.7	16.6	5.0
Beginning in 2008-09	3.3	4.0	-	4.8	3.4	2.5
Reviewing for 2008-09	31.6	22.7	23.3	35.2	27.4	42.5
Previously decided not to do this	42.3	24.0	32.6	33.3	52.6	50.0
Estimated costs of compliance with the provisions of the HEA for A/Y 2008-09	28,985	62,374	78,875	28,332	12,746	13,986
means and percentages by campus category.						

Appendix A

Survey Methodology

The 2008 National Survey of Computing and Information Technology in American Higher Education was designed to collect information about campus planning, policies, and procedures affecting the use of computers and information technology resources from colleges and universities in the United States (including Alaska and Hawaii).

Prospective survey participants were contacted by email early in September 2008. The email "invitation to participate" included a hotlink to an online copy of the 2008 Campus Computing questionnaire. The email invitation was sent to a representative sample of some 1200 two- and four-year public and private colleges and universities. The sampling design focused on public and private two- and four-year colleges and universities, omitting the small branch campuses of multi-campus districts and the hundreds of very small private two- and four-year colleges that enroll under 500 students.* Degree-granting for-profit colleges and proprietary schools were also excluded from the survey sample.

Reminder and dunning emails were sent in late in September and during the first weeks of October 2008. A total of 527 institutions completed usable questionnaires by October 22, 2008, the closing date for colleges and universities to complete the survey. More than three-fourths (78.6 percent) of the institutions that participated in the 2008 survey also participated in the 2007 survey. The number of colleges and universities participating in the 2008 survey, by type of institution, are shown below.

Category	2008 Survey Participants	Number as Counted by US Dept. of Educ.	Participation Rate (%)
Public Research and Doctoral Universities	75	168	44.6
Private Research and Doctoral Universities	44	92	47.8
Public 4-Year Colleges (master and baccalaureate institutions)	106	374	28.3
Private 4-Year Colleges (master and baccalaureate institutions	177	824	21.4
Public 2-Year Colleges (assoc. degree)	122	1,018	11.9

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*Fall 2007 enrollment data from the Integrated Postsecondary Education System Data (IPEDS) data files of the US Department of Education reveal that 27.1 percent (1,152) of the nation's 4,253 accredited, degree-granting two- and four-year colleges and universities enroll under 500 students (headcount enrollment). These institutions account for some 271,932 (1.5 pct.) of the nation's 18.052 million college students as of fall 2007 (the most recent numbers available from the US Department of Education). In contrast, the 505 colleges and universities that enroll 10,000 or more students represent just 11.4 of the total number of US degree-granting institutions yet account for 53.1 percent of total headcount enrollment, some 9.8 million students. (source: special analysis of the 2007 IPEDS enrollment data by The Campus Computing Project; see also *Digest of Education Statistics 2008.* US Department of Education, 2008, table. 224).

Appendix B

Institutions Participating in the 2008 Campus Computing Survey

Alabama
Auburn University at Montgomery
Auburn University-Main Campus
Birmingham-Southern College
Samford University
Tuskegee University
University of Alabama-Birmingham
University of Alabama-Tuscaloosa
University of Montevallo

Arkansas
John Brown University
University of Arkansas, Fayetteville

Arizona
Arizona State University - West
Mohave Community College
Northern Arizona University

California
Antelope Valley College
Art Center College of Design
Azusa Pacific University
Bakersfield College
California Lutheran University
California Polytechnic State University,
    San Luis Obispo
California State Polytechnic University –
    Pomona
Chapman University
Citrus College
Claremont McKenna College
College of the Sequoias
CSU - Bakersfield
CSU - Channel Islands
CSU - Chico
CSU - Dominguez Hills
CSU - East Bay
CSU - Fresno
CSU - Fullerton
CSU - Humboldt State University
CSU - Long Beach
CSU - Los Angeles
CSU - Monterey Bay
CSU - Northridge
CSU - Sacramento
CSU - San Bernardino
CSU - San Jose State University
CSU - San Marcos
CSU - Stanislaus
Fullerton College
Hartnell College
Harvey Mudd College
Loyola Marymount University
Merced College
Mills College
MiraCosta College
Mount St. Marys College

North Orange Community College District
Occidental College
Pacific Oaks College
Pepperdine University
Pitzer College
Saint Mary's College of California
San Diego State University
San Francisco State University
Santa Clara University
Shasta College
Solano College
Sonoma State University
Stanford University
University of California, Davis
University of California, Santa Barbara
University of La Verne
University of Redlands
University of San Diego
University of San Francisco
University of Southern California
University of the Pacific
Yuba College

Colorado
Community College of Aurora
Colorado College
Colorado Mountain College, Spring Valley
    Campus
Colorado State University-Ft. Collins
Front Range Community College
Lamar Community College
Morgan Community College
Northeastern Junior College
Otero Community College
Pikes Peak Community College
University of Colorado at Boulder
University of Colorado, Colorado Springs
University of Denver
Western State College of Colorado

Connecticut
Fairfield University
Quinnipiac University
University of Connecticut
University of Hartford
Wesleyan University
Yale University

District of Columbia
American University
Catholic University of America
Gallaudet University

Delaware
Delaware State University
University of Delaware

Florida
Barry University
Broward College
Florida Atlantic University
Florida Southern College
Florida State University
Hillsborough Community College
Manatee Community College
Santa Fe Community College
University of Central Florida
University of Miami
University of Tampa
Valencia Community College
Webber International University

Georgia
Abraham Baldwin Agricultural College
Albany State University
Armstrong Atlantic State University
Atlanta Metropolitan College
Augusta State University
Bainbridge College
Berry College
Clayton College & State University Morrow
Columbus State University
Dalton State College
Darton College
East Georgia College
Georgia Highlands College
Fort Valley State University
Gainesville State College
Georgia College & State University
Georgia Institute of Technology
Georgia Perimeter College
Georgia Southern University
Georgia Southwestern State University
Georgia State University
Gordon College
Kennesaw State University
Macon State College
Mercer University
Middle Georgia College
North Georgia College and State University
Oglethorpe University
Savannah State University
South Georgia College
Southern Polytechnic State University
Spelman College
University of Georgia
University of West Georgia
Valdosta State University
Waycross College

Hawaii
University of Hawaii

Idaho
Idaho State University

Illinois
Aurora University
Benedictine University
Bradley University
College of DuPage
DePaul University
Dominican University
Elgin Community College
Elmhurst College
Governors State University
Greenville College
Heartland Community College
Illinois Central College
Illinois Institute of Technology
Illinois Valley Community College
Knox College
Lake Forest College
Lake Land College
Lewis University
Lincoln Land Community College
Loyola University Chicago
Millikin University
Monmouth College
Moraine Valley Community College
National-Louis University
Northwestern University
Roosevelt University
Southeastern Illinois College
Southern Illinois University Edwardsville
Trinity International University
University of Illinois at Springfield
University of Illinois, Urbana-Champaign
Wheaton College

Indiana
DePauw University
Earlham College
Franklin College of Indiana
Goshen College
Grace College
Indiana University-Bloomington
Indiana University-East
Indiana University-South Bend
Indiana University-Southeast
Indiana University-Purdue University at
    Indianapolis
Indiana University-Purdue University-Fort
    Wayne
Manchester College
Purdue University
Rose-Hulman Institute of Technology
University of Indianapolis
University of Notre Dame

Iowa
Central University of Iowa
Clarke College
Eastern Iowa Community College District
Grinnell College
Luther College
Southeastern Community College
Wartburg College

Kansas
Fort Hays State University
Friends University
Johnson County Community College
Kansas State University

Kentucky
Asbury College
Berea College
Georgetown College
Henderson Community College
Northern Kentucky University
University of Kentucky
University of Louisville
Western Kentucky University

Louisiana
Louisiana State University-Baton Rouge
Southeastern Louisiana University
Xavier University of Louisiana

Maine
Bates College
Bowdoin College
Colby College
Thomas College

Maryland
College of Southern Maryland
Fredrick Community College
Goucher College
Hood College
Johns Hopkins University
Loyola College in Maryland
Montgomery College   Rockville
Prince George's Community College
Salisbury University
St. Mary's College of Maryland
United States Naval Academy
University of Maryland-Baltimore County
University of Maryland-Baltimore

Massachusetts
Becker College
Bentley College
Brandeis University
College of the Holy Cross
Hampshire College
Lesley University
Mount Holyoke College
Massachusetts College of Art
Massachusetts Institute of Technology
Northeastern University
Olin College of Engineering
Smith College
Springfield Technical Community College
Tufts University
University of Massachusetts-Boston
Wentworth Institute of Technology

Michigan
Albion College
Andrews University
Calvin College
Central Michigan University
Davenport University

Eastern Michigan University
Grand Valley State University
Henry Ford Community College
Hillsdale College
Kalamazoo College
Kalamazoo Valley Community College
Kettering University   Flint
Macomb Community College
Michigan Technological University
Oakland University
University of Michigan-Dearborn

Minnesota
Alexandria Technical College
Anoka Technical College
Augsburg College
Bemidji State University
Bethel University
Central Lakes College
Century College
College of St. Scholastica
Concordia College
Dakota County Technical College
Dunwoody College of Technology
Gustavus Adolphus College
Hamline University
Hennepin Technical College
Inver Hills Community College
Itasca Community College
Lake Superior College
Macalester College
Martin Luther College
Mesabi Range Community College
Metropolitan State University
Minneapolis Community & Technical College
Minnesota State University-Moorhead
Minnesota State College - Southeast Tech
    College
Minnesota State Community and Technical
    College
Minnesota West Community & Tech. College
Northland Community and Technical College
Northwest Technical College
Pine Technical College
Ridgewater College
Riverland Community/Technical College
Rochester Community & Technical College
Saint Paul College
St. Cloud State University
St. Cloud Technical College
St. Olaf College
South Central College
Southwest Minnesota State University
University of Minnesota, Duluth
Winona State University
University of Saint Thomas
Vermilion Community College

Missouri
Southwest Baptist University
Southeast Missouri State University
University of Central Missouri
University of Missouri-Columbia
Webster University

Mississippi
Jackson State University
Tougaloo College

Montana
Montana State University

Nebraska
Clarkson College
Creighton University
Nebraska Wesleyan University
University of Nebraska at Omaha

Nevada
University of Nevada, Las Vegas

New Hampshire
Rivier College
Saint Anselm College
Southern New Hampshire University
University of New Hampshire

New Jersey
Burlington County College
Drew University
The College of New Jersey
Mercer County Community College
Middlesex County College
New Jersey Institute of Technology
Ocean County College
Richard Stockton College of New Jersey
Rowan University
Rutgers University-New Brunswick
Seton Hall University
Union County College
William Patterson University

New Mexico
New Mexico State University
University of New Mexico-Main Campus

New York
Adelphi University
Bard College
College of New Rochelle
Cornell University
Genesee Community College
Hamilton College
Ithaca College
Jefferson Community College
Molloy College
Monroe Community College
Monroe College
Pace University
Rensselaer Polytechnic Institute
Skidmore College
St. Ambrose University
St. Bonaventure University
St. Francis College
SUNY-Binghamton
SUNY-Buffalo State College
SUNY-College at Oneonta
SUNY-Orange
SUNY-University at Albany

SUNY-University at Buffalo
SUNY-University of Rochester
Ulster County Community College

North Carolina
Alamance Community College
Appalachian State University
Belmont Abbey College
Central Piedmont Community College
Davidson College
Elon University
Fayetteville State University
Guilford College
Johnston Community College
University of North Carolina-Asheville
University of North Carolina-Chapel Hill
University of North Carolina-Wilmington

North Dakota
Minot State University
North Dakota State University
University of North Dakota

Ohio
Ashland University
Capital University
Case Western Reserve University
Cedarville University
Cincinnati State College
Cleveland State University
Cuyahoga Community College
Heidelberg College
Kent State University
Kenyon College
Malone College
Miami University
Marietta College
Muskingum College
Oberlin College
Ohio Northern University
Ohio Wesleyan University
Ohio University – main campus
Otterbein College
Shawnee State University
Sinclair Community College
University of Cincinnati
University of Findlay
University of Northwestern Ohio
Wittenberg University

Oklahoma
Southern Nazarene University
Oklahoma Christian University
University of Central Oklahoma
University of Science and Arts of Oklahoma
University of Tulsa

Oregon
George Fox University
Lewis & Clark College
Linn-Benton Community College
Oregon State University
Portland Community College
Reed College

Southern Oregon College
University of Oregon
Willamette University

Pennsylvania
Allegheny College
Alvernia College
Bryn Mawr College
Bucks County Comm. College
Carnegie Mellon University
Clarion University of Pennsylvania Clarion
Delaware County Community College
Drexel University
Duquesne University
Edinboro University of Pennsylvania
Franklin and Marshall College
Gannon University
Gwynedd-Mercy College
Haverford College
Keystone College
Kutztown University
La Salle University
Lehigh University
Mansfield University of Pennsylvania
Mercyhurst College
Messiah College
Millersville University of PA
Montgomery County Community College
Moravian College
Pennsylvania State Univ., Univ. Park Campus
Philadelphia Biblical University
Philadelphia University
Reading Area Community College Reading
Robert Morris University
Shippensburg University
Temple University
The University of The Arts
University of Pennsylvania
West Chester University of Pennsylvania
Wilkes University

Rhode Island
Brown University
Bryant University
Community College of Rhode Island
University of Rhode Island

South Carolina
Charleston Southern University
Clemson University
Newberry College
Presbyterian College
University of South Carolina

South Dakota
Dakota Wesleyan University
University of South Dakota

Tennessee
Lee University
Nashville State Technical Community College
Northeast State Technical Community College
Pellissippi State Technical Community College
Tennessee State University
University of Memphis
University of the South

Texas
Abilene Christian University
Austin College
Baylor University
Brazosport College
College of the Mainland
Collin County Community College
Concordia University at Austin
Lamar University
Palo Alto College
Stephen F. Austin State University
Texas A & M University, Galveston
Texas Southern University
Texas State Technical College System Office
Texas State University-San Marcos
University of North Texas
University of Texas at Austin
University of Texas at El Paso
Wiley College

Utah
Eastern Mennonite University
University of Utah
Utah Valley University

Vermont
Community College of Vermont
University of Vermont

Virginia
George Mason University
Hampton University
James Madison University
Longwood University
Lynchburg College
Old Dominion University
Sweet Briar College
Randolph-Macon College
Virginia Commonwealth University
Virginia Military Institute
Virginia State University
Virginia Tech

Washington
Bastyr University
Grays Harbor College
Lake Washington Tech College
Olympic College
Seattle Pacific University
South Puget Sound Community College
University of Washington, Bothell
University of Washington, Tacoma
Whitman College

West Virginia
Alderson Broaddus College
Concord University
Marshall University
West Virginia Wesleyan College

Wisconsin
Alverno College
Cardinal Stritch University
Carroll College
Marquette University
University of Wisconsin-Madison
University of Wisconsin Oshkosh
University of Wisconsin - Platteville
University of Wisconsin-Whitewater
Wisconsin Lutheran Colleges

Wyoming
Laramie County Community College
Sheridan College

THE CAMPUS COMPUTING PROJECT