THE CAMPUS COMPUTING PROJECT

The 2011 National Survey of Information Technology in U.S. Higher Education

Big Gains in Going Mobile; Slow Movement to Cloud Computing

Colleges and universities made significant gains in deploying mobile apps over the past year according to new data from the 2011 Campus Computing Survey. However, the new survey reveals that campuses have been slow to move key operational and research functions to Cloud Computing. The data also document the continuing consequences of the IT budget cuts that have affected many institutions in recent years.

Across all sectors of higher education, the 2011 survey documents big gains in the proportion of campuses that have activated mobile apps. More than half (55.3 percent) of public universities have activated mobile apps as of fall 2011, or will do so in the coming academic year, compared to a third (32.5 percent) in fall 2010. Public four-year colleges posted also large gains, rising to 43.6 percent, up from 17.8 percent in 2010) as did community colleges (40.9 percent this fall vs. 12.4 percent in 2011).

Private institutions also posted big gains on going mobile. For private universities, the number deploying mobile apps rose to 50.0 percent, up from 42.2 percent in 2010; among private four-year colleges, the numbers were up by a third, from 25.2 percent in 2010 to 35.6 percent in 2011.

"Several factors explain these dramatic gains," says Kenneth C. Green, director of The Campus Computing Project. "Colleges and universities are playing catch-up

with the consumer experience. Students come to campus with their smartphones and tablets expecting to use mobile apps to navigate campus resources and use campus services. Also important is that compared to a year ago, more firms - both ERP and LMS providers - now offer mobile options for their campus clients." Green adds that some technology pro-

viders also offer free mobile apps and services, which means that the options for and cost of going mobile have changed dramatically in the past year.
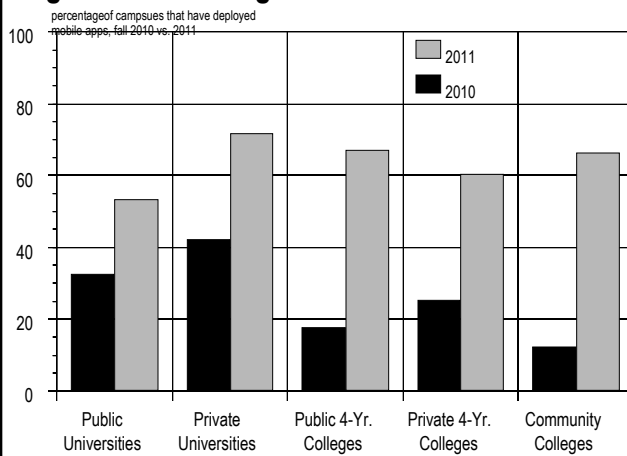
Despite much discussion in both the campus and the corporate sectors about the operational and financial benefits of Cloud Computing, the 2011 survey reveals that colleges and universities have been slow to move mission-critical operations to the Cloud. Just 4.4 percent of the survey participants report that their campus has moved or is converting to Cloud Computing for ERP (administrative system) services (range: from 1.3 among public universities to 7.1 percent for private universities). Similarly, just 6.5 percent have moved to Cloud Computing for storage, archiving, or business continuity services. And although Cloud Computing should offer significant benefits for research and high performance computing (HPC) activities, just 2.4 percent of public universities and 6.6 percent of private universities report migrating these activities to Cloud Computing.
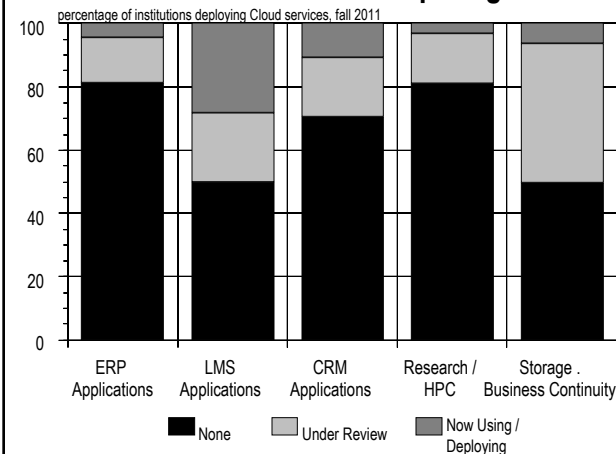
Other Cloud services post slightly higher numbers. For example, more than fourth (27.8 percent) of the survey participants report that they have moved or are migrating LMS services to Cloud Computing, and a tenth (10.9 percent) indicate that their institution is using Cloud-based CRM (Customer Relationship Management) services.

"The campus ERP providers have been slow to offer Cloud Services to their clients," says

Big Gains on Going Mobile

percentage of campuses that have deployed mobile apps, fall 2010 vs. 2011

Slow Movement to Cloud Computing

percentage of institutions deploying Cloud services, fall 2011

Green. "Although the cost savings may seem compelling, trust really is the coin of the realm: many campus IT officers are not ready to migrate mission-critical data, resources, and services to the Cloud Services offered by their IT providers."

New data from institutions participating in the annual survey reveal that a third (35.8 percent) of colleges and universities experienced a budget cut in central IT services for the current academic year, down from 41.6 percent last year and half (50.0 percent) in fall 2009.

The proportion of public institutions reporting budget cuts fell slightly in fall 2011, although the number that experienced budget cuts still remains significant. For example, just over half (54.7 percent) of public universities suffered budget cuts for central IT services for fall 2011, compared to three-fifths (59.8 percent) for fall 2010 and two-thirds (67.1 percent) in fall 2009. Among public four-year colleges, budget cuts declined slightly to 43.6 percent in 2011, compared to 45.8 percent a year ago and 56.9 percent in fall 2009. Two-fifths (39.0 percent) of community colleges experienced cuts in their budget for central IT services for the current academic year, compared to 46.2 percent in 2010 and 37.0 percent in fall 2009.

Private/non-profit institutions generally fared better than their public counterparts: one-fourth (24.9 percent) of private universities report IT budget cuts for fall 2011, about the same as a year ago (24.4 percent) but still well below the 56.9 percent posted in 2009. Among private four-year colleges, the percentage reporting budget cuts fell to 24.7 percent this fall, compared to 31.9 percent in 2010 and 41.9 percent in 2009.

"As was the case last fall, the new survey data provide a only modicum of good news about IT budgets: yes, fewer institutions experienced budget reductions this year than last," says Kenneth C. Green, founding director of The Campus Computing Project. "But the budget cuts continue for many institutions and the proportion of public campuses experiencing IT budget reductions remains high. The consequences are particularly daunting for community colleges where en-

rollments are exploding while the financial resources for IT services to support online and on-campus courses are eroding."

The 2011data also document an increasingly competitive campus market for Learning Management Systems (LMS). The proportion of survey partici-

IT Budget Cuts, 2006-2011

percentage of institutions reporting a budget cut in central IT services, 2006-2011

Public Universities · Private Universities · Public 4-Yr. Colleges · Private 4-Yr. Colleges · Community Colleges

■ 2006 · 2007 · 2008 · 2009 · 2010 · 2011

pants reporting that their institution uses versions of Blackboard (including Angel and WebCT) as the campus-standard LMS fell to 50.6 percent in 2011, compared to 57.1 percent last year and down from 71.0 percent in fall 2006. Concurrently, Blackboard's major LMS competitors – Desire2Learn, Moodle, and Sakai - have all gained share during this period. Additionally, several new LMS providers, including Epsilen, Instructure, and Loudcloud, among others, are generating significant interest and beginning to sign some interesting campus clients.

"The campus LMS market remains a textbook example of a mature market

with immature, or evolving, technologies, and that's a prescription for a volatile market," says Green. "Blackboard's plans to retire legacy LMS products have been a catalyst for many institutions to review the campus LMS strategy and to evaluate other LMS applications."

Senior campus IT officers remain upbeat for the future of eBooks. Nine-tenths (90.1 percent) of the survey participants agree or strongly agree that "eBook content will be an important source for instructional resources in five years," up from 86.5 percent in 2010 and 76.3 percent in 2009.
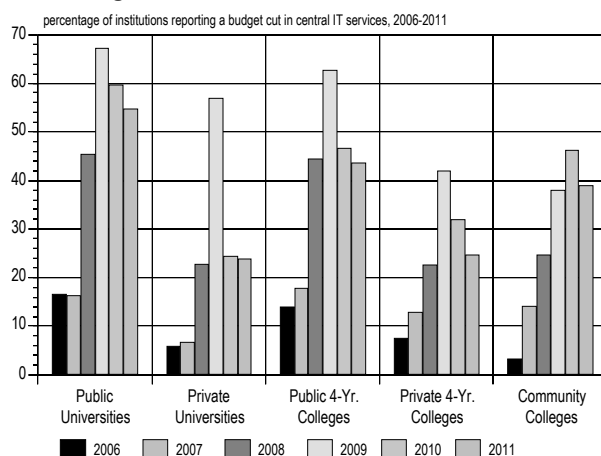
"The platform options, market opportunities, and enabling technologies for eBooks continue to improve," says Green. But he notes that for most students, eBooks and eTextbooks do not yet offer a competitive alternative to used textbooks. He cites a recent survey by *Student Monitor* in which a fifth of undergraduates opted for a used book priced the same as a new textbook, a rented textbook, or digital textbook, suggesting that many students see real added-value in a textbook that others have already annotated.

The 2011 Campus Computing Survey is based on data provided by CIOs, CTOs, or other senior campus IT officials representing 496 two- and four-year colleges and universities. Survey participants completed the online questionnaire in Septermber and early October, 2010.

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CAMPUS COMPUTING, 2011

The 22st National Survey of Computing and
Information Technology in US Higher Education

Kenneth C. Green
THE CAMPUS COMPUTING PROJECT
www.campuscomputing.net

20 October 2011

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Methodology

- **496 survey respondents**

- **Web-based data collection**

- **Survey period: Sept 16 – Oct 13**

- **80 pct of the 2011 participating campuses also participated in the 2010 survey**
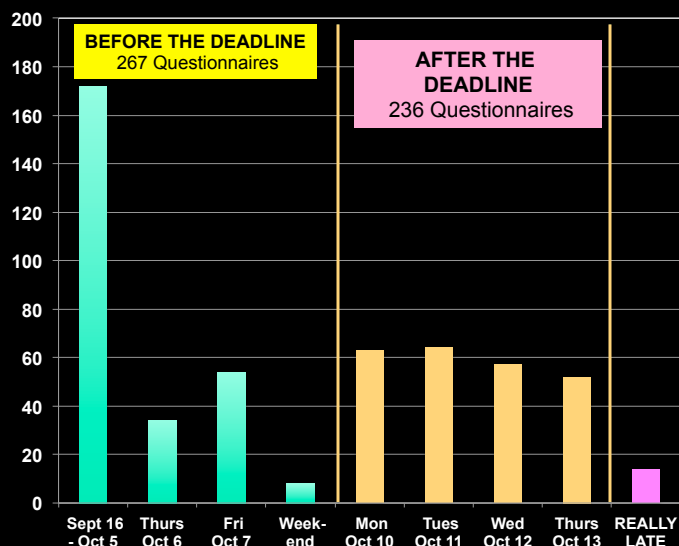
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2011 Survey Participants

Category	Dept of Ed N (adjusted)	Survey N	Participation Rate (pct)
Public Research & Doctoral Universities	168	76	45%
Private Research & Doctoral Universities	92	42	46%
Public 4-Year Colleges (Baccalaureate & Masters)	374	94	25%
Private 4-Year Colleges (Baccalaureate & Masters)	824	174	21%
Associate Degree/ Public Community Colleges	1018	110	11%

Why Survey Researchers Send (lots of) Annoying eMail Reminders

BEFORE THE DEADLINE
267 Questionnaires

AFTER THE DEADLINE
236 Questionnaires

(chart with x-axis categories: Sept 16 - Oct 5, Thurs Oct 6, Fri Oct 7, Week-end, Mon Oct 10, Tues Oct 11, Wed Oct 12, Thurs Oct 13, REALLY LATE; y-axis 0 to 200)

- 47 pct. of the surveys were submitted AFTER the initial deadline

2011 Highlights

- **Big gains in deployment of mobile apps**

- **Budget cuts not as bad as two years ago, but still common, especially for public institutions**

- ***Where are the Clouds?* Little Cloud deployment, save for student email**

- **Transitions continue in the the LMS market**

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Single Most Important IT Issue, 2000-2008

Trends, 2000-2008

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%)

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Single Most Important IT Issue, 2011

There is no "Single Most Important" IT Issue!
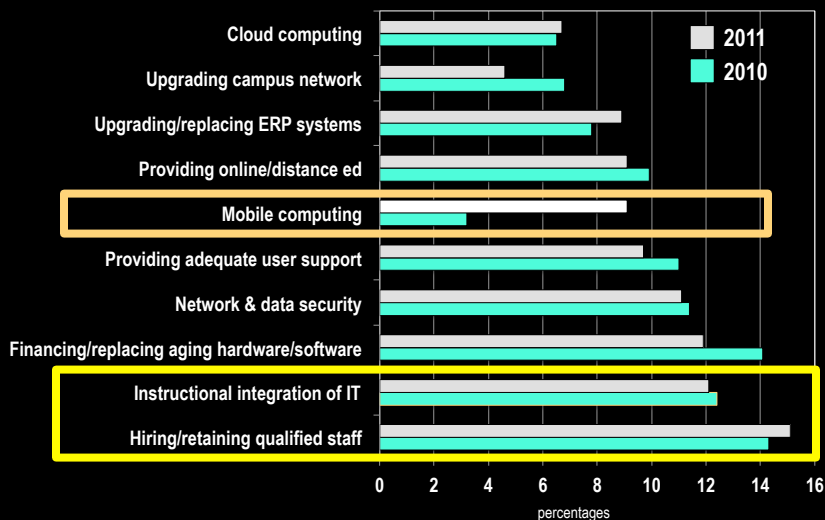
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Single Most Important Issue – By Sector, 2011

All Campuses	Public Universities	Private Universities	Public 4-Yr. Colleges	Private 4-Yr. Colleges	Community Colleges
Hiring/ Retaining IT Staff (15.1%)	Hiring/ Retaining IT Staff (15.8%)	Data & Network Security (21.4%)	Hiring/ Retaining IT Staff (17.0%)	Hiring/ Retaining IT Staff (14.9%)	IT Staffing & Mobile Computing (Tie: 14.6%)
Instructional Integration of Info Tech. (12.1%)	Financing / Replacing Aging IT (13.2%)	Instructional Integration, IT Financing, IT Staffing, & ERP Systems (4-way Tie: 11.9%)	Online Ed & Instructional Integration (Tie: 12.8%)	Instructional Integration of Info Tech. (14.4%)	Financing / Replacing of Aging IT & IT Integration (13.6%)
Financing Replacing of Aging IT (11.9%)	Network & Data Security (11.8%)		IT Security & Financing / Replacing Aging IT (Tie: 11.7%)	Adequate User Support (11.5%)	Hiring/ Retaining IT Staff (10.9%)

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Budget Cuts, 2006-2011

percentage of institutions reporting budget reductions for central IT services over prior year funding, 2006-2010
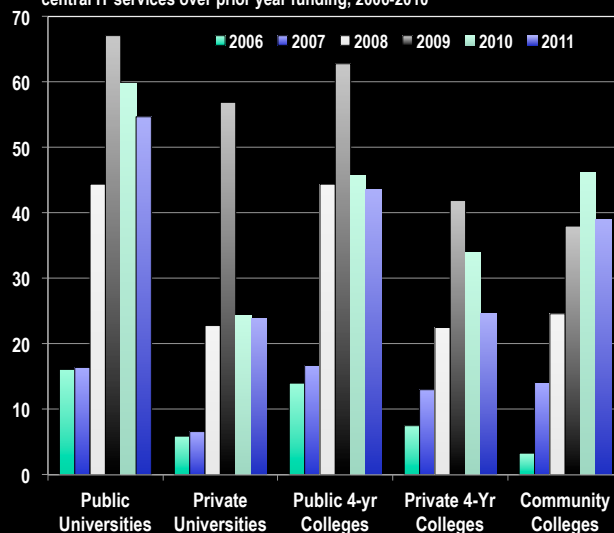
- **Compounding consequences of continuing budget cuts**
- **Privates fare better than publics**
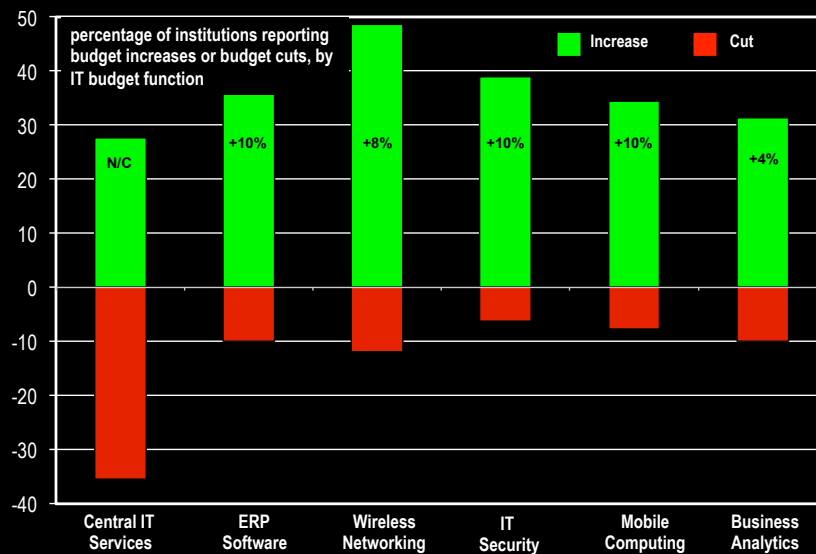- **One-fifth experienced additional mid-year cuts, averaging 2 pct.**

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Budgets Trends by IT Function, 2011

percentage of institutions reporting budget increases or budget cuts, by IT budget function

Increase Cut

Central IT Services: N/C
ERP Software & Services: +10%
Wireless Networking: +8%
IT Security: +10%
Mobile Computing: +10%
Business Analytics: +4%

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Reorganizing IT Units, Fall 2011

Organizational structures for many IT units are in transition.

34 pct have reorganized academic computing units in the past two years

15 percent who have reorganized academic computing expect to do it again in the next two years!.

29 pct expect to restructure academic computing the next two years.

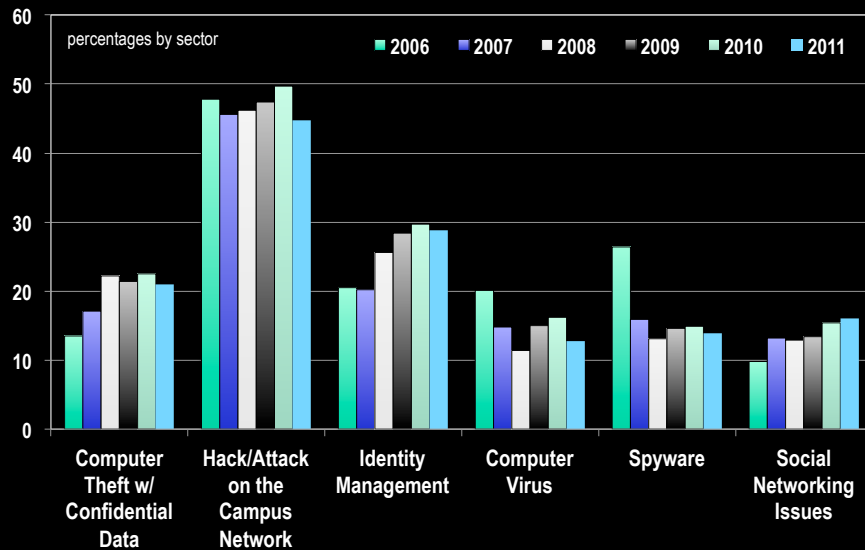Little change in these numbers in recent years

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IT Security

IT Security Incidents, A/Y 2006 - 2011

percentages by sector

IT Security

Student Security Incident Linked to a Social Networking Site

percentages by sector, 2006-2011
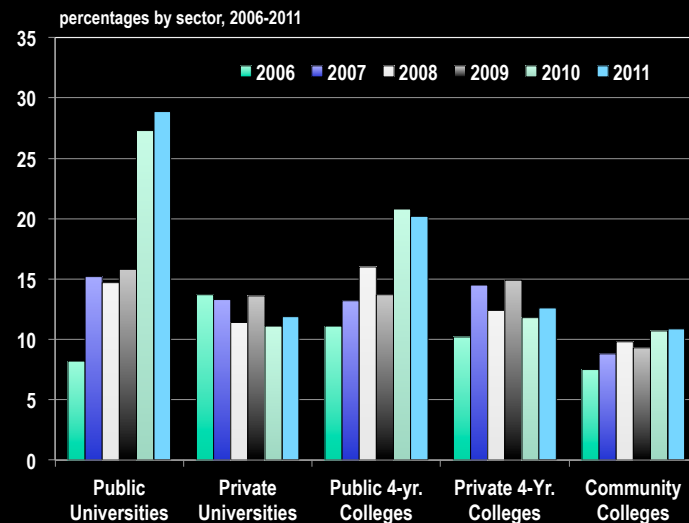
- **Social networks continue to present campus security challenges**

IT Security

Intentional Employee Misconduct Affecting IT Security

percentages by sector, 2007-2011

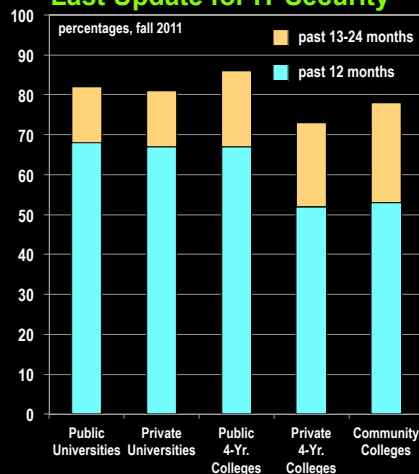Legend: 2007 · 2008 · 2009 · 2010 · 2011
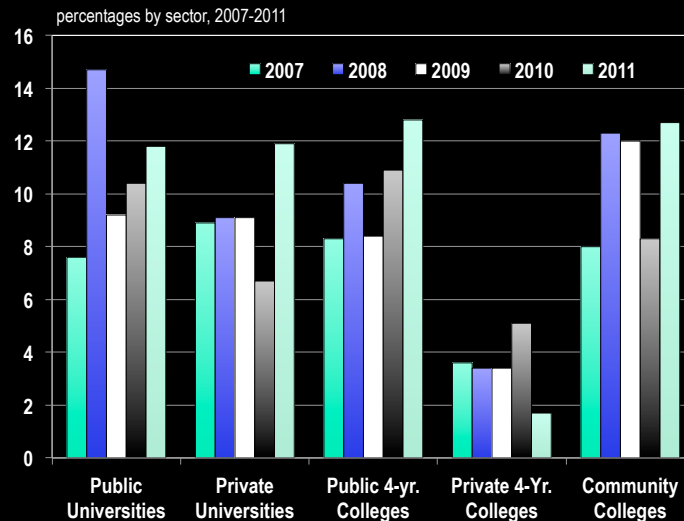
- Employee misconduct reflects rising stress levels among IT staff

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Updating Campus Strategic Plans

Last Update for IT Security

percentages, fall 2011

Legend: past 13-24 months · past 12 months

Last Update for IT Disaster Recovery
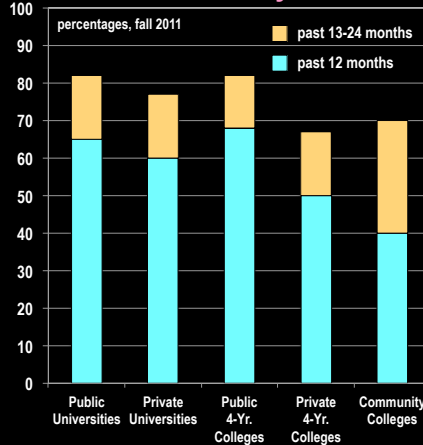
percentages, fall 2011

Legend: past 13-24 months · past 12 months

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Emergency Notification
Participation Strategy: "Opt-In" (Must Register)

percentages by sector, 2008-2011

- 2008
- 2009
- 2010
- 2011

Public Universities, Private Universities, Public 4-yr. Colleges, Private 4-Yr. Colleges, Community Colleges
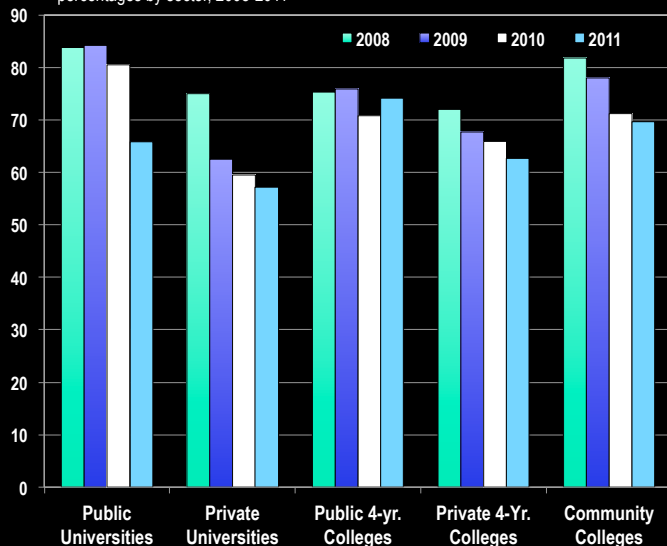
- Notification systems are of limited value if large numbers of campus users have no access
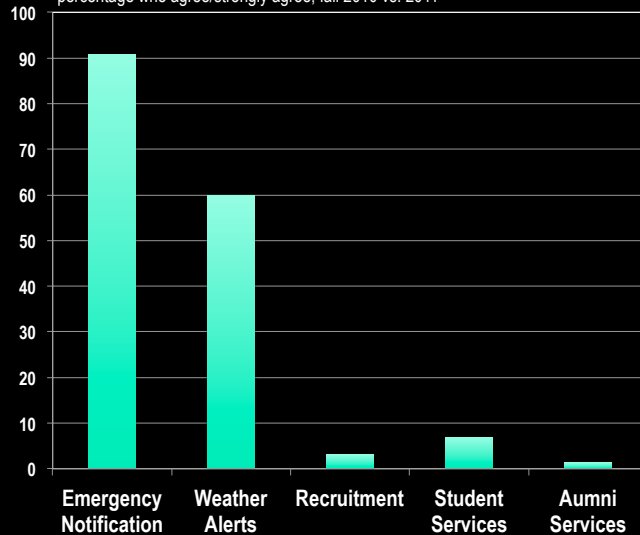
- Lower numbers are better; more users pre-registered

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Emergency Notification
Deploying the Notification System

percentage who agree/strongly agree, fall 2010 vs. 2011

Emergency Notification, Weather Alerts, Recruitment, Student Services, Aumni Services

- Seeking new opportunities to extract value from the notification system

- More use increases the risk of text spam

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Let's Talk About Clouds

Where are the Clouds?

High Clouds
ERP & HPC

Middle Clouds
CRM & LMS

Low Clouds
mail & calendar

A fifth of campuses (21 pct) have a strategic plan for Cloud Computing, up from 15 pct in 2010 and 9 pct in 2009.

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The Cloud
Outsourced eMail Services

percentages, by campus type, fall 2011
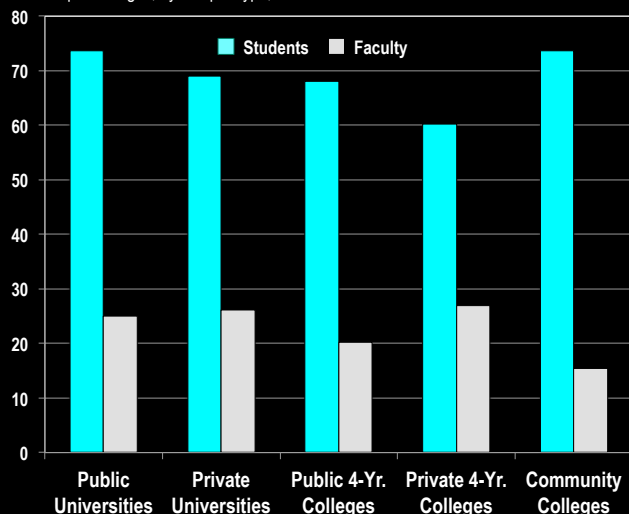
- About two-thirds of survey participants now outsource student email vs. a fifth for faculty email
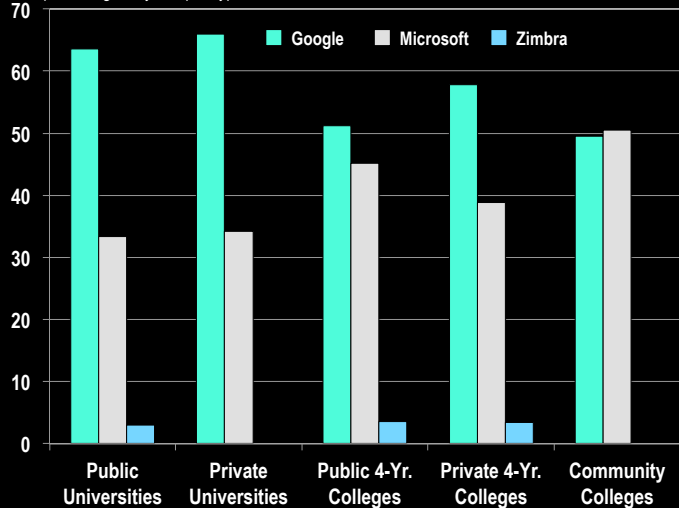
- Just a seventh of campuses (15 pct) are using/ converting to cloud-based office apps.

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The Cloud
Outsourced eMail Services

percentages, by campus type, fall 2011

- Google leads as the provider of outsourced / cloud-based campus email services
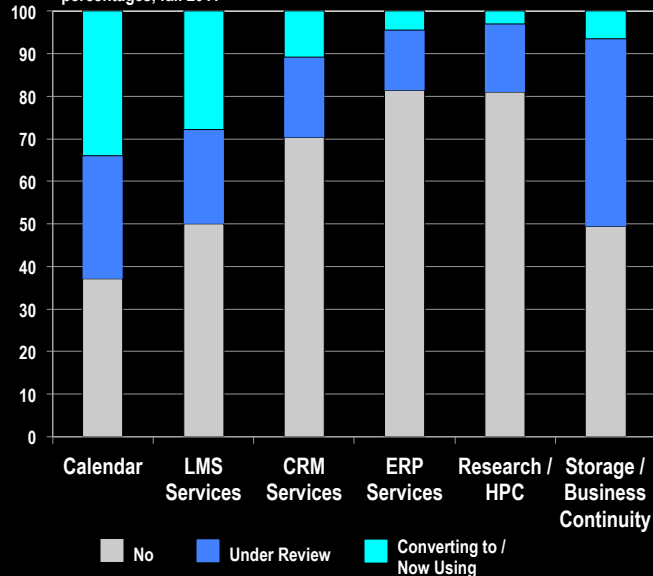
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The Cloud
Little Migration to Cloud Computing

percentages, fall 2011

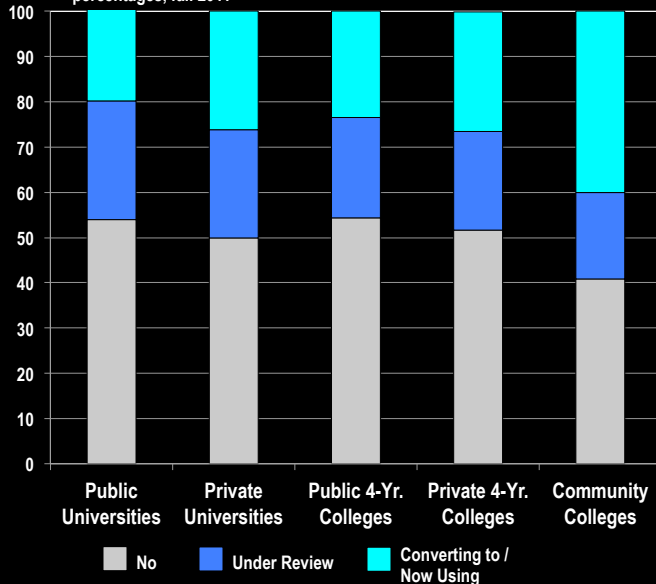**Little movement to the Cloud for the _Really_ "Big" Tasks**

- **Risk**
- **Limited Options from Providers**
- **Trust**
- **Control**

Legend: No | Under Review | Converting to / Now Using

Categories: Calendar, LMS Services, CRM Services, ERP Services, Research / HPC, Storage / Business Continuity

LMS Moves to the Clouds

percentages, fall 2011

LMS as the "toe in the Cloud" experience for higher education?

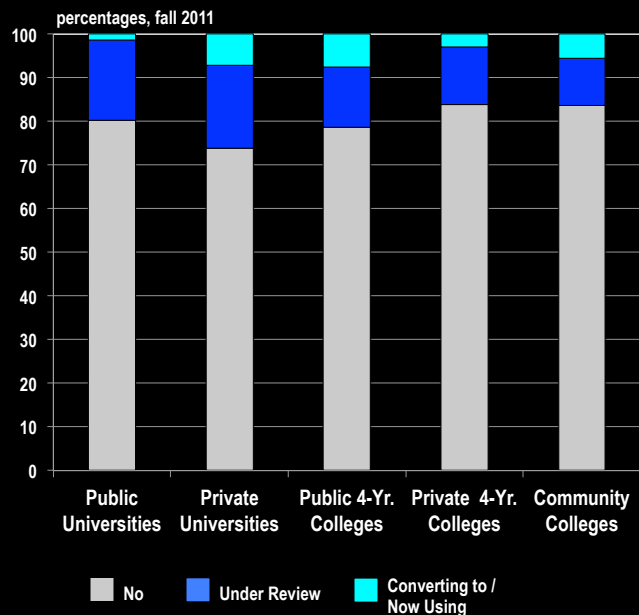Legend: No | Under Review | Converting to / Now Using

Categories: Public Universities, Private Universities, Public 4-Yr. Colleges, Private 4-Yr. Colleges, Community Colleges

ERP Moves (Slowly) to the Cloud
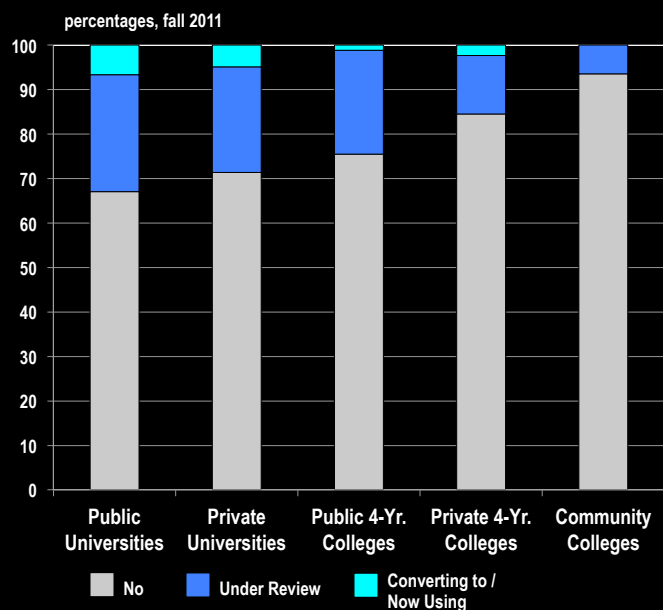
Do Multi-Campus System Structures Foster Migration to the Cloud for ERP?

- **Public 4-Yr Colleges**
- **Community Colleges**

Research and HPC Move (Slowly) to the Cloud

Departmental vs. institutional strategies, initiatives, and deployment?

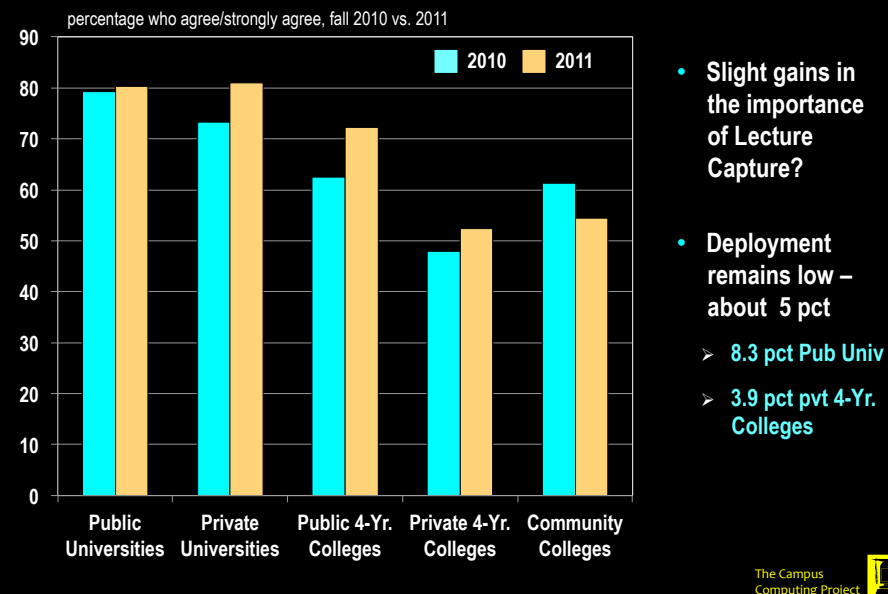## "Lecture Capture is an Important Part of Our Campus Plan for Developing & Delivering Instructional Content"

percentage who agree/strongly agree, fall 2010 vs. 2011

- Slight gains in the importance of Lecture Capture?

- Deployment remains low – about 5 pct
  - 8.3 pct Pub Univ
  - 3.9 pct pvt 4-Yr. Colleges

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Lecture Capture and Podcasting

Rising Use of Lecture Capture
(percentage of classes by sector, 2008-2011)
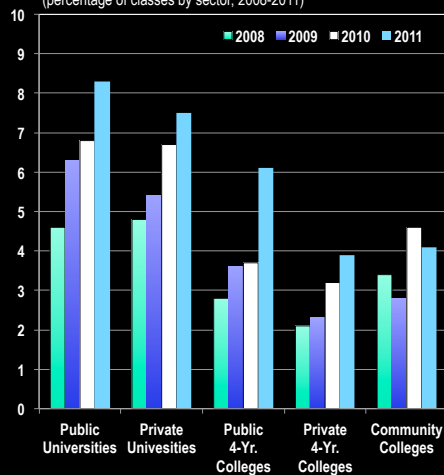
Steady Gains in Podcasting
(percentage of classes by sector, 2007-2011)

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CAMPUS COMPUTING, 2011
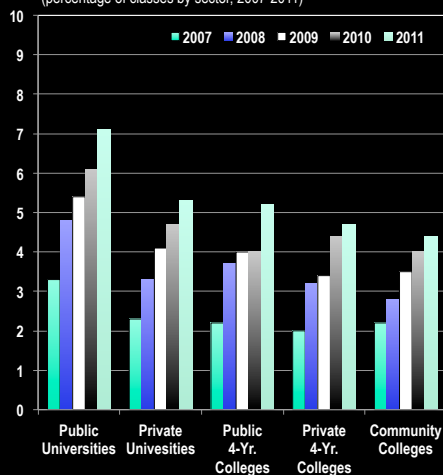Kenneth C. Green • The Campus Computing Project

The Future Bodes Well for eBooks!

eBook Content Will be an Important Source for Instructional Resources in Five Years
(pct who agree/strongly agree, 2009 - 2011)
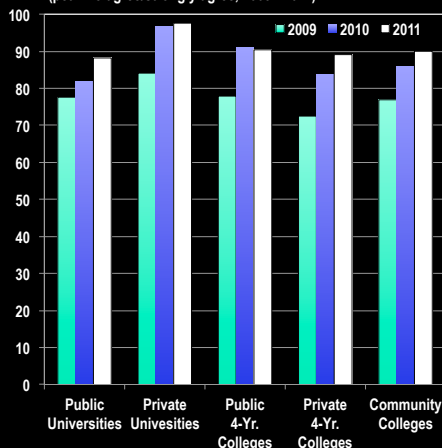
eBook Readers Will be an Important Platform for Instructional Content in Five Years
(pct who agree/strongly agree, 2009 - 2011)
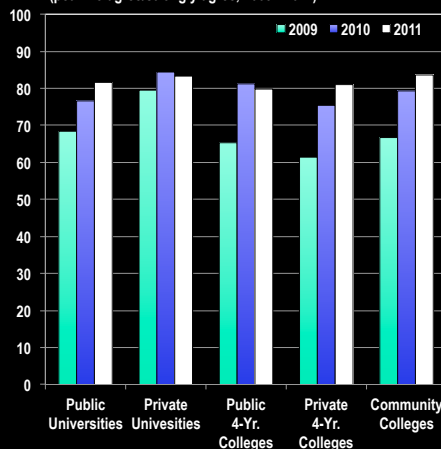
Encouraging the Use of the Creative Commons License for Digital Content

percentages, fall 2011
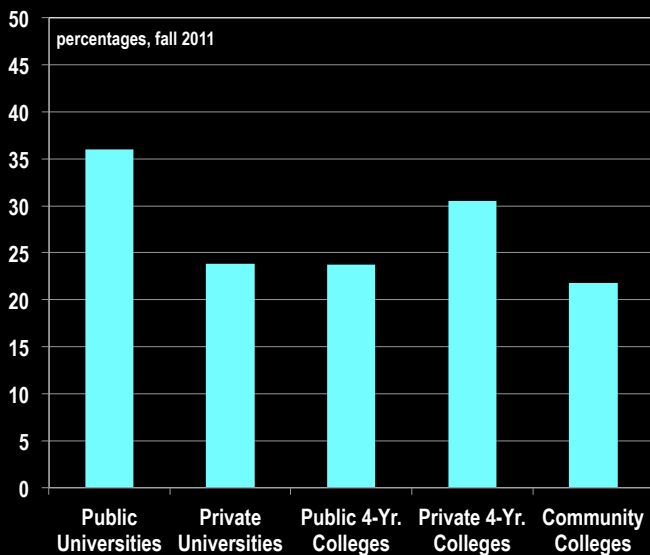
Producers vs. users

• Survey question focuses on the faculty as producers of digital content

• Uncertain impact on the faculty prerogative to select course materials

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A Profile of the LMS Market, Fall 2011

Does your campus have a single [campus-wide] LMS?
(percentages, all institutions)

Pie chart segments:
- No Std LMS 7%
- Other: 2%
- Sakai: 7%
- Moodle 19%
- Jenzabar: 2%
- eCollege: 1%
- Instructure: 1%
- Desire2Learn 11%
- Blackboard (including Angel & WebCT) 51%
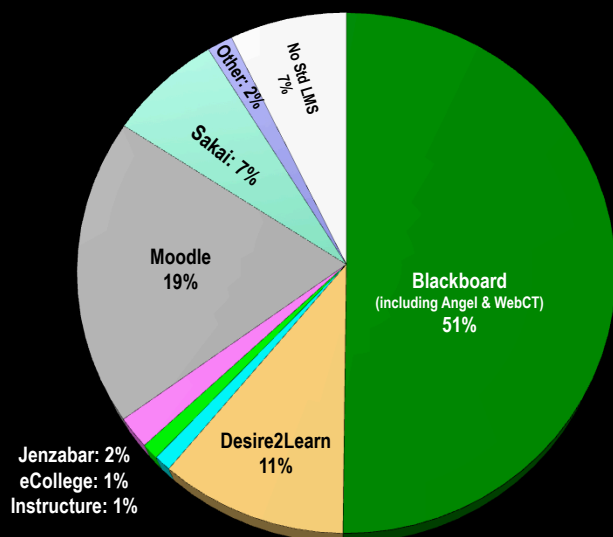
- Slow but continuing gains in the pct. of classes using the LMS: 59 pct in 2010, up from 17 pct in 2000.
  - Public U: 67%
  - Comm Colleges: 51 %

- Blackboard share down from 57 pct in 2010, 71 pct in 2006.

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"Mobile Apps are an Important Part of Our Campus Plan to Enhance Instr. Resources & Campus Services"

percentage who agree/strongly agree, fall 2010 vs. 2011
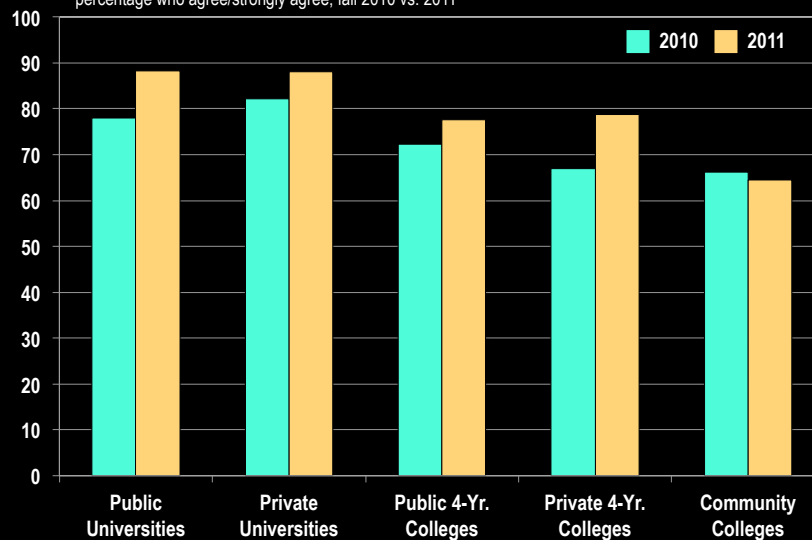
Legend: 2010, 2011

Bar chart values (approximate):
- Public Universities: 2010 ≈ 78, 2011 ≈ 88
- Private Universities: 2010 ≈ 82, 2011 ≈ 88
- Public 4-Yr. Colleges: 2010 ≈ 72, 2011 ≈ 77
- Private 4-Yr. Colleges: 2010 ≈ 67, 2011 ≈ 78
- Community Colleges: 2010 ≈ 66, 2011 ≈ 64

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Activating Mobile Apps, Fall 2010 vs. 2011

percentages reporting mobile apps are now active or will be deployed during the current academic year
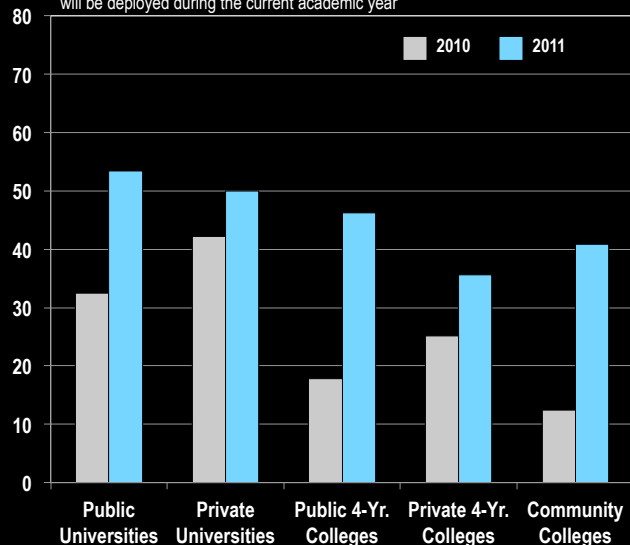
- **Big gains in 12 months**
- **Impact of student expectations and consumer market experience**
- **More (LMS & ERP) mobile app & service providers means a wide range of costs for deployment**

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Campus Policies Student Printing Services

percentages, fall 2011
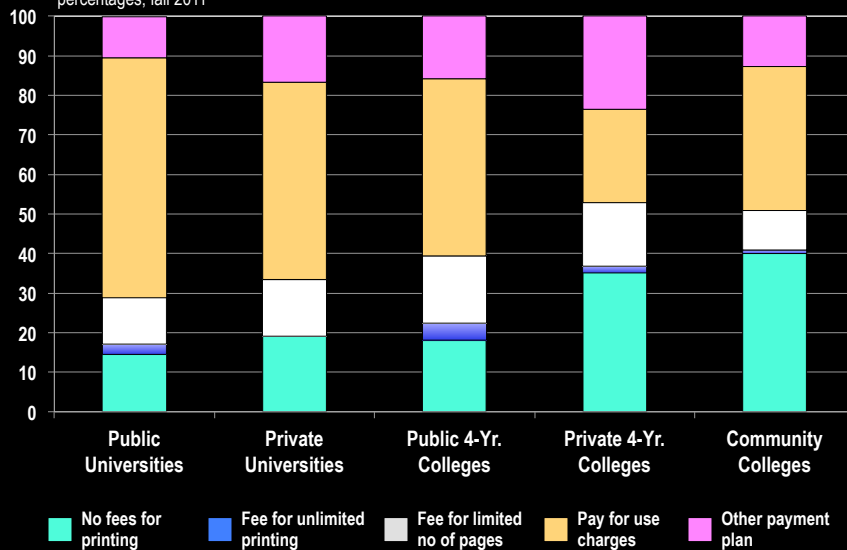
No fees for printing • Fee for unlimited printing • Fee for limited no of pages • Pay for use charges • Other payment plan

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Campus License for Antiplagarism Software

percentages by sector, 2008-2011
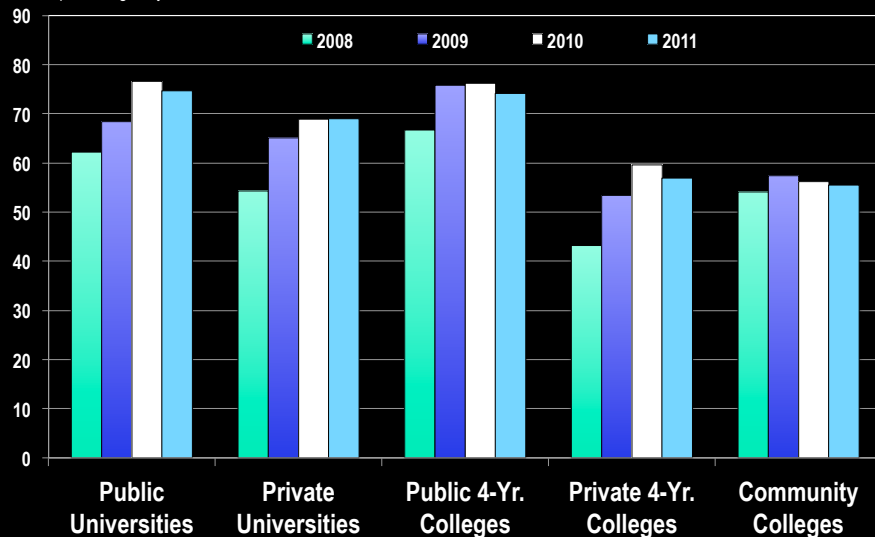
Campus Projects to Assess the Impact of IT on Instructional Services and Academic Programs

percentages by sector, 2001-2011
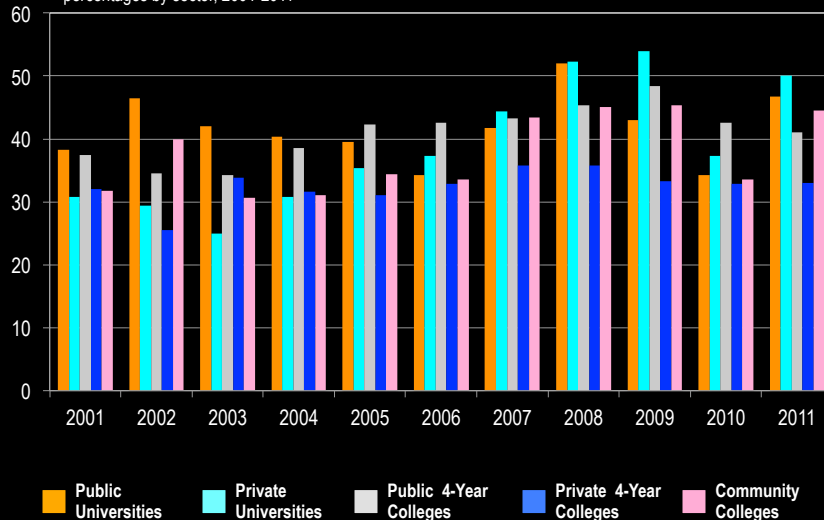
Some Key IT Issues

Continuing Impact of Budget Cuts

- ◆ **Impact on resources, services, and infrastructure**

- ◆ **Compounding consequences of cuts early in decade, new cuts, plus mid-year cuts.**

- ◆ **Struggling to meet rising expectations and demand with fewer resources**

- ◆ **Rising stress on units and individuals**

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Two Views About the Value of IT for Instruction

◆ **Faculty:** 85 pct. of CIOs/survey respondents agree "faculty view technology is a critical resource for instruction."

◆ **Presidents:** Less than half (45 pct) report that investments in technology to support on-campus instruction have been "very effective."

Pct. of Presidents Who Assess the Campus Investment in IT to Support Instruction as "Very Effective"

Source: Presidential Perspectives Survey, *INSIDE HIGHER ED*, March 2011
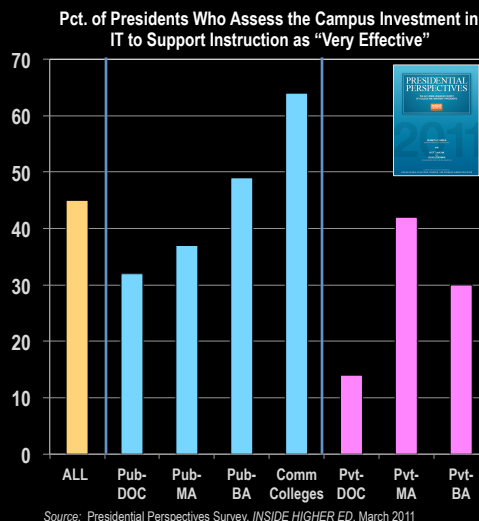
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Transitions in the LMS Market

◆ "a mature market with immature technology. . ."

◆ More campuses using hosted services

◆ Time certain retirement of legacy Blackboard LMS applications is a catalyst for campus review and many migrations

◆ Increased competition – and options for campuses – as new companies and applications enter the campus LMS market.

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2011 EDUCAUSE Conference
20 October 2011 • Philadelphia, PA

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Where Are The Clouds?

- ◆ Low levels of deployment for core ERP and research services.

- ◆ Trust is the "coin of the realm"

- ◆ LMS: "a toe in the clouds"

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eBooks / eTexts

- ◆ **CIO's remain bullish on content and platforms**

- ◆ **No clear, compelling value statement on eBooks – to date**

- ◆ *Student Monitor:* **all price points being equal, 19 pct. of students would by used books**

eBooks – Year Two

It not clear that eBooks – from any provider, on any platform, or accessed via any eBook reader – provide, at present, a compelling value proposition for most college students. Indeed, for eReaders and digital texts to advance in the campus market publishers and eReader providers will have to address three key challenges: price, features, and format.

INSIDE HIGHER ED **digitaltweed**

15 Aug 2010

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