



# THE CAMPUS COMPUTING PROJECT

campuscomputing.net

October 2016

*The 2016 National Survey of eLearning and Information Technology in US Higher Education*

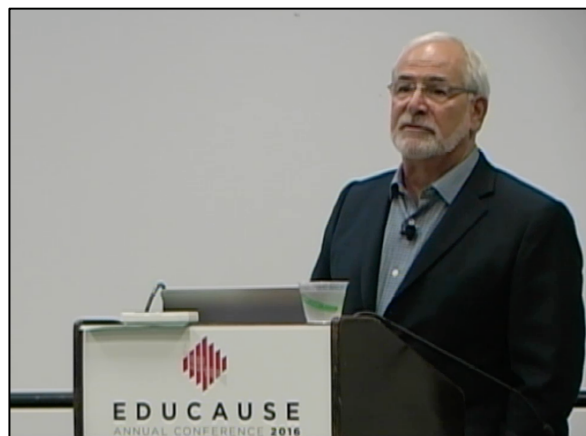
## KEY CAMPUS IT ISSUES: Personnel, Instruction, Budgets, Security, and Analytics

### Top Five Campus IT Priorities Over the Next Two-Three Years, Fall 2016

pct. of institutions reporting very important (6/7)  
scale: 1=not important; 7=very important

1	Hiring / retaining qualified IT staff (82%)	<ul style="list-style-type: none"><li>75% report IT salaries are not competitive</li><li>28% have reduced IT staffing</li><li>23% cut funds for professional development</li></ul>
2	Assisting faculty with IT instructional integration (81%)	<ul style="list-style-type: none"><li>23% assess faculty IT training as excellent</li><li>17% have a formal policy to assess faculty IT efforts as part of review and promotion</li></ul>
3	Upgrading / enhancing network and data security (81%)	<ul style="list-style-type: none"><li>49% report network attack (60% in univ.)</li><li>48% increased spending on IT security</li><li>51% expect loss of sensitive campus data</li></ul>
4	Providing adequate user support services (78%)	<ul style="list-style-type: none"><li>User support overrated: 59% very satisfied??</li><li>IT training for faculty: just 27% excellent.</li><li>IT training for students: just 10% excellent.</li></ul>
5	Leveraging IT resources to support student success (76%)	<ul style="list-style-type: none"><li>Using Courseware in Gen Ed classes: 12%</li><li>Only 25% assess impact of IT on instruction</li><li>Just 16% "very satisfied" with analytics</li></ul>

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Casey Green of the Campus Computing Project at the 2016 EDUCAUSE Conference.



**Talking about the data:** Sharon P. Pitt, assoc. vice president and CIO at Binghamton University, David L. Smallen, vice president for libraries and information technology at Hamilton College, and Casey Green, founding director of Campus Computing, at EDUCAUSE 2016.



EDUCAUSE  
ANNUAL CONFERENCE 2016

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Link to the conference video  
<http://tinyurl.com/gohl8hk>



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## KEY CAMPUS IT ISSUES: Personnel, Instruction, Budgets, Security, and Analytics

Hiring and retaining IT talent has become increasingly challenging for a growing number of colleges and universities. Large numbers of CIOs and senior campus IT officers report that IT budgets at their institutions have not fully recovered from the compounding consequences of the annual budget cuts and mid-year budget reductions of the Great Recession. Assisting faculty with the instructional integration of information technology remains a top campus IT priority even as higher education is now in the fourth decade of its much discussed “technology revolution.” IT security remains continuing challenge. And for all the conversation, on- and off-campus, about the power of Big Data and analytics, there is ample evidence that campus IT officials do not view current institutional investments in analytics as effective or that the outcomes of these investments are, at present, satisfactory.

These are some of the key findings from the fall 2016 Campus Computing Survey. Launched in 1990, Campus Computing is the largest continuing study of IT planning and policy issues in American higher education.” The 2016 survey is based on data provided by CIOs and senior campus IT officials at 339 two- and four-year colleges and universities across the United States.

### *The Compounding Consequences of Budget Cuts*

Eight years after the beginning of the Great Recession, almost two-thirds (63 percent) of the CIOs and senior IT officers who participated in the 2016 survey report that IT funding at their campus “has not fully recovered from the budget cuts we have experienced over the past four-six years.” As shown below, almost a third of public universities and BA/MA institutions, a quarter of private BA/MA colleges, a fifth of private universities, and more than two-fifths of community colleges experienced IT budget cuts for the 2016-2017 academic year. Moreover, many campuses also suffered mid-year budget reductions for 2016/17, averaging 8 percent, which compounds the consequences of the annual budget cuts. Unfortunately, this has been the recurring cycle for a significant number of institutions across all sectors: an annual budget cut followed by a mid-year budget reduction.

<b>IT Budget Cuts, Fall 2016</b> (percentages)	<b>Annual Budget Cut</b>	<b>Mid-Year Budget Cut</b>	<b>Mean Mid- Year Cut</b>
All Institutions	29.5	24.7	8.1
Public Universities	32.7	17.3	4.9
Private Universities	18.7	15.2	3.4
Public BA/MA Colleges	31.1	15.5	12.0
Public BA/MA Colleges	23.1	30.5	8.0
Community Colleges	43.1	32.3	9.3

“These continuing budget cuts and mid-year reductions come as campus IT officials experience rising demand for resources and services: enhanced IT security, exploding demand for faster wireless networks, rising licensing costs for mission critical ERP applications, increased personnel costs, and growing demand for user support services” says Kenneth C. Green, founding director of The Campus Computing Project. “At many institutions, the rising demand coupled with continuing budget cuts threaten to overwhelm the core IT infrastructure – mission critical instructional resources and administrative services.”

Interestingly, although 90 percent of the survey participants report that “senior campus leadership understands the strategic value of institutional investments in IT infrastructure, resources, and services” and 84 percent report strong faculty support for “the role of technology to enhance teaching and instruction,” these high levels of administrative and faculty support have not been sufficient to stem the recurring budget cuts experienced by too many institutions, especially public colleges and in particular community colleges.

The 2016 survey data also highlight the role of student IT fees as a key source of funds for campus IT budgets. Across all sectors, the majority of institutions add the student IT fees to the core campus IT budget rather than sequester these funds for new, supplemental services and resources intended to serve students. Interestingly, although private institutions are less likely than public colleges and universities to have a student technology fee, the student fees are higher in private institutions.

<b>Student IT Fees</b> (percentages)	<b>ALL INSTITUTIONS</b>	<b>Pub. Univ.</b>	<b>Pvt. Univ.</b>	<b>Pub. BA/MA</b>	<b>Pvt. BA/MA</b>	<b>Comm. College</b>
Campus has a Student IT Fee?	54.6	76.5	32.3	70.7	41.2	60.2
Average Full-time Student IT Fee	\$ 275	233	399	231	370	198
Allocate IT Fees to Core IT Budget	72.3	72.2	57.1	69.2	76.3	77.1
Allocate IT Fees for New Services	26.9	27.8	42.9	30.8	23.7	22.9
Inform Students About How the Campus Spends IT Fees?	26.9	27.8	42.9	30.8	23.7	22.9

“At one time many institutions used student IT fees to provide new, supplemental services rather than to supplant stressed core campus IT budgets,” says Green. The 2016 survey data reveal that student fees are now overwhelming used to replace funds lost due to continuing IT budget reductions.

### *Hiring and Retaining IT Personnel*

Hiring and retaining IT personnel, one of the top five IT campus priorities in recent surveys, moved to the top priority in fall 2016. More than four-fifths (82 percent) of the survey participants identified “hiring/retaining qualified IT staff” as a “very important” campus IT priority over the next two-three years. Not surprisingly, a key factor affecting staffing is money: three-fourths (75 percent) of those surveyed agreed/strongly agreed that “we have a difficult time retaining IT talent because our salaries and benefits are not competitive with off-campus job opportunities.” The IT staffing problem can be particularly challenging in rural areas and small college towns, where the competition for a limited pool of IT talent may be intense and expensive.

### *IT Priorities*

In addition to IT staffing, the top five campus IT priorities for fall 2016 focus on instruction, IT security, user support services, and leveraging IT resources to advance the institutional priorities for student success and degree completion.

“Perhaps not surprisingly,” says Green, “the list of the top five IT priorities has been fairly stable for the past several years. Campus IT officers confront and must manage their budgets to accommodate rising, and at times competing, demands for a wide range and growing range of IT resources and services.”

### Top Five Campus IT Priorities Over the Next Two-Three Years, Fall 2016

pct. of institutions reporting very important (6/7)  
scale: 1=not important; 7=very important

<b>1 Hiring / retaining qualified IT staff (82%)</b>	<ul style="list-style-type: none"> <li>75% report IT salaries are not competitive</li> <li>28% have reduced IT staffing</li> <li>23% cut funds for professional development</li> </ul>
<b>2 Assisting faculty with the instructional integration of IT (81%)</b>	<ul style="list-style-type: none"> <li>23% assess faculty IT training as excellent</li> <li>17% have a formal policy to assess faculty IT efforts as part of review and promotion</li> </ul>
<b>3 Upgrading / enhancing network and data security (81%)</b>	<ul style="list-style-type: none"> <li>49% report network attack (60% in univ.)</li> <li>48% increased spending on IT security</li> <li>51% expect loss of sensitive campus data</li> </ul>
<b>4 Providing adequate user support services (78%)</b>	<ul style="list-style-type: none"> <li>User support overrated: 59% very satisfied??</li> <li>IT training for faculty: just 27% excellent.</li> <li>IT training for students: just 10% excellent.</li> </ul>
<b>5 Leveraging IT resources to support student success (76%)</b>	<ul style="list-style-type: none"> <li>Using Courseware in Gen Ed classes: 12%</li> <li>Only 25% assess impact of IT on instruction</li> <li>Just 16% "very satisfied" with analytics</li> </ul>

### Great Faith in the Power and Potential of Technology

Notwithstanding the IT challenges their institutions confront, CIOs and senior campus IT officers continue to express great faith in the power of technology to enhance, if not transform, instruction and learning at their campuses. For example, 88 percent agree/strongly agree that "digital curricular resources provide a richer and more personalized learning experience than traditional print products." And 96 percent of the 2016 survey participants believe that "adaptive learning technology has great potential to improve learning outcomes for students."

Yet even as they see great potential for instructional technologies and digital resources, four-fifths (81 percent) of CIOs and senior campus officials identify "assisting faculty with the instructional integration of information technology" as a "very important" institutional IT priority over the next two-three years.

<b>Strong CIO Support for the Instructional Benefits of Information Technology</b> (percentage who agree/strongly agree)	<b>ALL INSTITUTIONS</b>	<b>Pub. Univ.</b>	<b>Pvt. Univ.</b>	<b>Pub. BA/MA</b>	<b>Pvt. BA/MA</b>	<b>Comm. College</b>
Adaptive learning technology has great potential to improve learning outcomes for students	95.8	94.1	97.0	98.3	93.9	98.4
Digital curricular resources provide a richer and more personalized learning experience than traditional print materials	87.5	88.2	90.9	87.9	81.7	96.8
Campus efforts at "going digital" are impeded because not all students have access to notebook computers or tablets.	29.7	17.6	9.1	32.8	22.9	61.9

"This strong statement of support for digital instructional resources, coupled with the concern for making better use of technology in instruction, is not surprising," says Green. "CIOs and senior campus IT officers are, understandably, advocates for the instructional use of technology at their institutions. Although faculty make decisions about curricular resources for their courses, CIOs are responsible for the enabling infrastructure, including much of the student and faculty training and user support services."

Yet Green also notes that the absence of clear and compelling evidence about the benefits of technology in instruction and the impact of IT on learning outcomes can be problematic. For example, the survey data reveal that just a fourth of the institutions that participated in the 2016 survey "have a formal program to assess the impact of IT on instruction and learning outcomes." Consequently, comments Green, "decisions about IT in instruction are often fueled by good intentions, anecdotal data, opinion, and epiphany as opposed to research and hard evidence."

### Analytic Angst

The public and campus conversations about the power and potential of Big Data and analytics notwithstanding, this year's survey provides evidence of "analytic angst" across all sectors of American higher education: the survey data suggest the performance of analytics has fallen far short of the campus need and anticipated benefits. Less than a fifth of the survey participants assess recent campus investments in analytics as "very effective."

And just 16 percent report that across their institution, most users are "very satisfied" with current analytic tools and resources.

"The campus angst with analytics should not be surprising," notes Green. "As with so many new technologies in the consumer, corporate, and campus markets, the actual, implied, and inferred promises often fall short of initial performance." Green notes the current disappointment with analytics on campus is not new. His 2011 and 2012 surveys of college presidents, chief academic officers, and CIOs all indicated that these senior campus officials did not assess the investment in analytics as "very effective."

"The effective use of analytics involves more than deploying a new technology. While good analytic tools are, of course, important, so too is user training, so that senior campus officials and faculty who are eager for just-in-time, complex analyses of student performance understand the potential and the limits of their data and their analytic tools." Green also notes that the effective use of analytics many require a major change in culture at many institutions, a transition from using data as a weapon to using data and analytics as a resource: "The key question should be not what did we do wrong, but how can we do better, and how to the data and analytic tools show us the path 'to better' for our students."

### IT Security

IT security remains a continuing challenge across all sectors of American higher education. In aggregate, more two-fifths of the institutions participating the survey experienced the loss of confidential data due to the theft of a device and hacks or attacks on campus networks in A/Y 2015/16. Universities, in particular, appear to be attractive targets. A fourth of the surveyed campuses had experience with either spyware or ransomware this past year experience and also with a student security incident such as cyber-bullying via social media. Security problems caused by employee malfeasance, often a reflection of stress, anger, or over-worked IT staff, were also problems for many institutions, especially universities.

<b>IT Security Issues, A/Y 2015/16</b> (percentages)	<b>ALL INSTITUTIONS</b>	<b>Pub. Univ.</b>	<b>Pvt. Univ.</b>	<b>Pub. BA/MA</b>	<b>Pvt. BA/MA</b>	<b>Comm. College</b>
Theft of a computer, phone, tablet, or USB drive or other device with confidential data files	44.4	63.5	60.6	39.7	42.0	30.8
Hack/attack on the campus network	48.8	78.8	69.7	44.8	40.5	35.4
Spyware / Ransomware	22.4	38.5	21.2	22.4	20.6	12.3
Student security incident linked to social media activity (bullying, etc.)	23.5	36.5	27.3	31.0	21.4	9.2
Employee malfeasance	10.9	21.2	21.3	5.2	6.9	10.8

The 2016 Campus Computing Survey is based on data provided by senior campus IT officials, typically, the CIO, CTO, or other senior campus IT officer, representing 339 two- and four-year public and private/non-profit colleges and universities across the United States. Survey respondents completed the online questionnaire from September 13 through October 20. PDF copies of the 2016 Campus Computing Survey will be available on December 10th from The Campus Computing Project in Encino, CA (campuscomputing.net). Price: \$45, which includes shipping to US addresses.

### THE CAMPUS COMPUTING PROJECT

Begun 1990, The Campus Computing Project is the largest continuing study of the role of computing, eLearning, and information technology in American higher education. The project's national studies draw on qualitative and quantitative data to help inform campus IT leaders, college faculty and administrators, policy-makers, and others interested in a wide array of information technology planning and policy issues that affect colleges and universities.

The 2016 Campus Computing Survey was supported, in part, by the following project sponsors: Amazon, Apple, Blackboard, Campus Management, CampusWorks, Canvas by Instructure, Cengage Learning, Citrix, Desire2Learn, Echo360, Ellucian, The Bill & Melina Gates Foundation, IBM Higher Education, InSource Services Group, Jenzabar, Kaltura, Kuali, Longsight, Macmillan Learning, McGraw-Hill Higher Education, Microsoft, Moran Technology Consulting, Oracle, Pearson, Sonic Foundry, TouchNet Information Systems, and Unicon.

### THE CAMPUS COMPUTING PROJECT

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## CAMPUS COMPUTING, 2016

The 27<sup>th</sup> National Survey of Computing, eLearning,  
and Information Technology in US Higher Education

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**2016 EDUCAUSE Conference**  
26 Oct 2016 • Anaheim, CA

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## Methodology

- 339 institutional participants
- Web-based data collection
- Survey period: Sept. 13 – Oct. 20
- 76 pct. of the 2016 participating institutions also completed the 2015 survey

Participants by Campus Type	Dept of Ed N (adjusted)	Survey N	Participation Rate (%)
Public Research & Doctoral Universities	168	52	31%
Private Research & Doctoral Universities	92	33	36%
Public 4-Year Colleges (Baccalaureate & Masters)	374	58	16%
Private 4-Year Colleges (Baccalaureate & Masters)	824	131	16%
Associate Degree/ Public Community Colleges	1018	65	7%

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## 2016 Highlights

- Top IT priorities focus on staffing, instruction, user support, advancing the campus completion agenda, and IT security.
- Big differences in the CIO assessments of the *things we do/provide* vs. the *things we buy*.
- Great faith in the benefits of adaptive learning and digital curricular resources.
- Still recovering from the impact of budget cuts during and after the “Great Recession.”
- Significant angst with analytics.

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## New Survey Items for 2016

	Pct. Agree/ Strongly Agree
The senior academic leadership at my institution understands the strategic value of institutional investments in IT infrastructure, resources, and services.	90
Digital curricular resources provide a richer and more personalized learning experience than traditional print materials.	88
Faculty here strongly support the role of technology to enhance teaching and learning.	88
Our IT funding has not fully recovered from the budget cuts we experienced over the past four-six years.	63

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## New in 2016

## How Do Campuses Spent Student IT Fees?

Student IT Fees	ALL	Pub. Univ.	Pvt. Univ.	Pub. BA/MA	Pvt. BA/MA	Comm. College
IT Fee? (pct. yes)	54.6	76.5	32.3	70.7	41.2	60.2
Average Full-time Student Fee	\$ 275	233	399	231	370	198
Core IT Budget %	72.3	72.2	57.1	69.2	76.3	77.1
New IT Services %	26.9	27.8	42.9	30.8	23.7	22.9
Inform Students %	26.9	27.8	42.9	30.8	23.7	22.9

How Do You Spend Student IT Fees? (%)	ALL	Pub. Univ.	Pvt. Univ.	Pub. BA/MA	Pvt. BA/MA	Comm. College
Computer Labs	43.0	68.6	19.4	51.7	26.0	46.0
Enhanced WiFi	38.2	60.8	16.1	50.0	27.5	41.3
Instructional Facilities	39.1	56.9	19.4	55.2	26.7	44.4
Curricular Resources	20.9	37.3	9.7	27.6	11.5	27.0
Library Resources	18.8	39.2	6.5	36.2	6.1	17.5
User Support	35.5	68.6	6.5	50.0	19.8	41.3
Printing for Students	28.1	35.3	16.1	37.9	22.1	30.2

- More publics than privates have IT fees, but fees in privates are higher.

- Most campuses spend IT fee funds to supplement core budgets.

- Most institutions do not inform student about how their IT fees are spent.

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## Top Five Campus IT Priorities Over the Next Two-Three Years, Fall 2016

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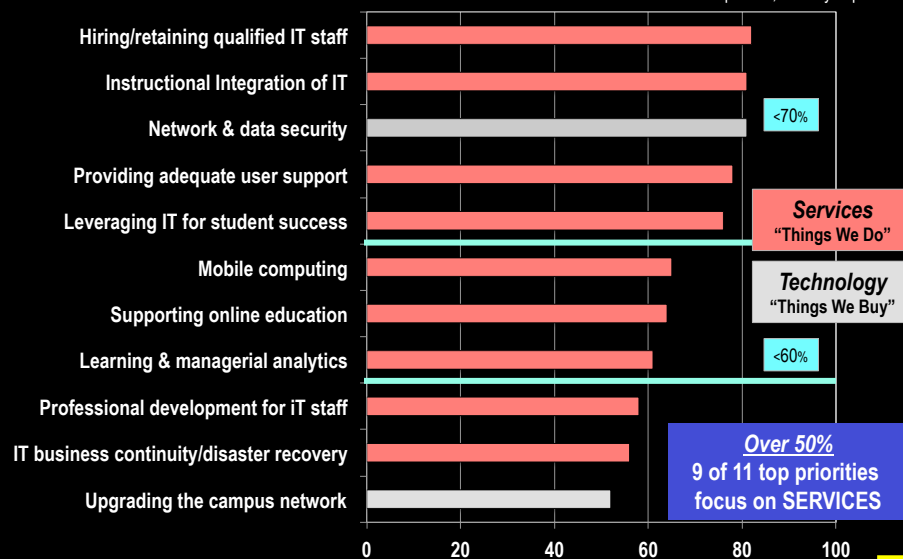
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## Top Institutional IT Priorities Over the Next Two-Three Years, Fall 2016

pct. reporting very important (6/7)  
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## Top Three Institutional IT Priorities by Sector, Fall 2016

All Campuses	Public Universities	Private Universities	Public BA/MA Colleges	Private BA/MA Colleges	Community Colleges
Hiring/Retaining Qualified IT Staff (81%)	Hiring/Retaining Qualified IT Staff (90%)	Hiring/Retaining Qualified IT Staff (87%)	Leveraging IT Resources for Student Success (88%)	Assisting Faculty Integrate IT into Instruction and IT Security (81%)	Leveraging IT Resources for Student Success (83%)
Assisting Faculty Integrate IT into Instruction and IT Security (81%)	Network & Data Security (87%)	Network & Data Security (88%)	Assisting Faculty Integrate IT into Instruction (83%)	Hiring/Retaining Qualified IT Staff (80%)	Instruction User Support & Hiring (81%)
Providing Adequate User Support (78%)	Leveraging IT Resources for Student Success (83%)	Assisting Faculty Integrate IT into Instruction (81%)	Online Education (81%)	Providing Adequate User Support (75%)	Network & Data Security (77%)

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## CIOs Have Great Faith in the Benefits of Digital Technologies for Instruction (Fall 2016)

	% Agree/ St. Agree	<b>But actual deployment numbers are low:</b> <ul style="list-style-type: none"> <li>Only 12% of general education classes use courseware</li> <li>Just 5% of developmental and general ed. courses use adaptive learning technologies</li> </ul>
Adaptive learning technology has great potential to improve learning outcomes for students.	96	
Digital curricular resources make learning more efficient and effective for students.	95	
Digital curricular resources make learning more efficient and effective for students.	87	
Our efforts to go "all digital" with course materials will be impeded by the fact that many of our students do not own the digital devices – computers or tablets – they need to access digital content and resources.	30	

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## Rating the IT Infrastructure, Fall 2016

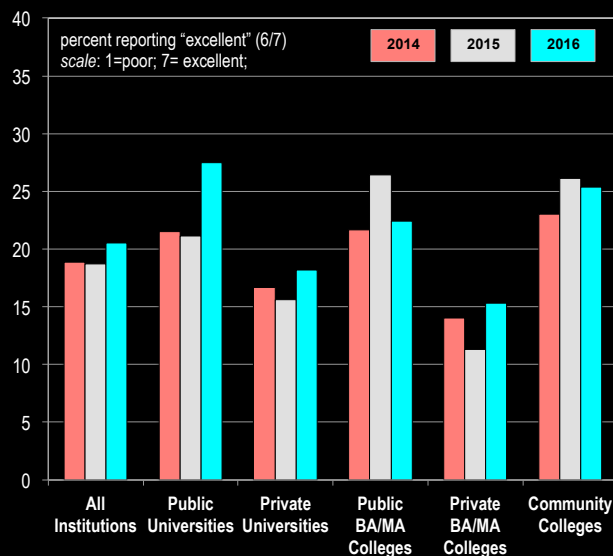


- Highest rankings for the network, "hardware," and content
- Lower rankings for services
- Would faculty and students agree with the ranking for user support services?

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## CIO Assessments of Digital Resources and Services for Disabled Users, Fall 2014-2016



- Campuses struggle to provide legally-mandated digital access and resources to disabled students

Lawsuits Waiting to Happen



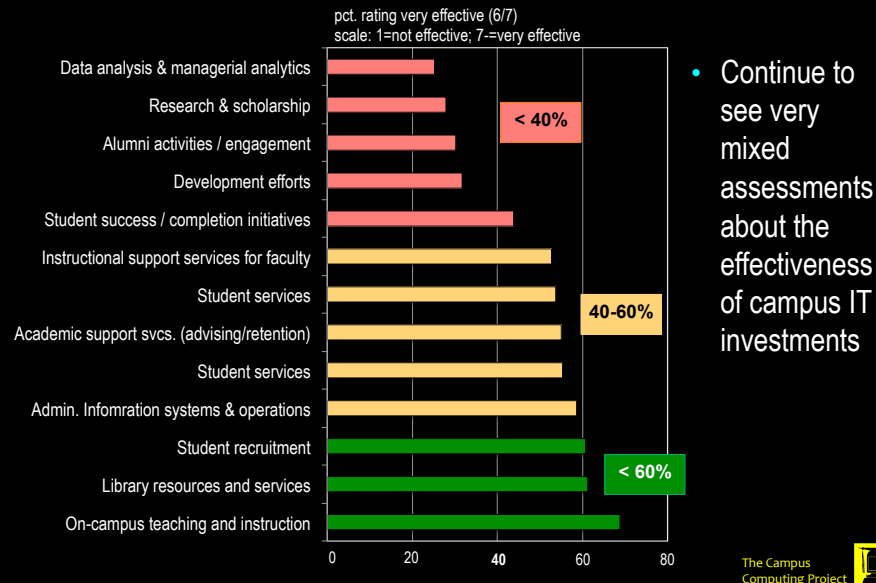
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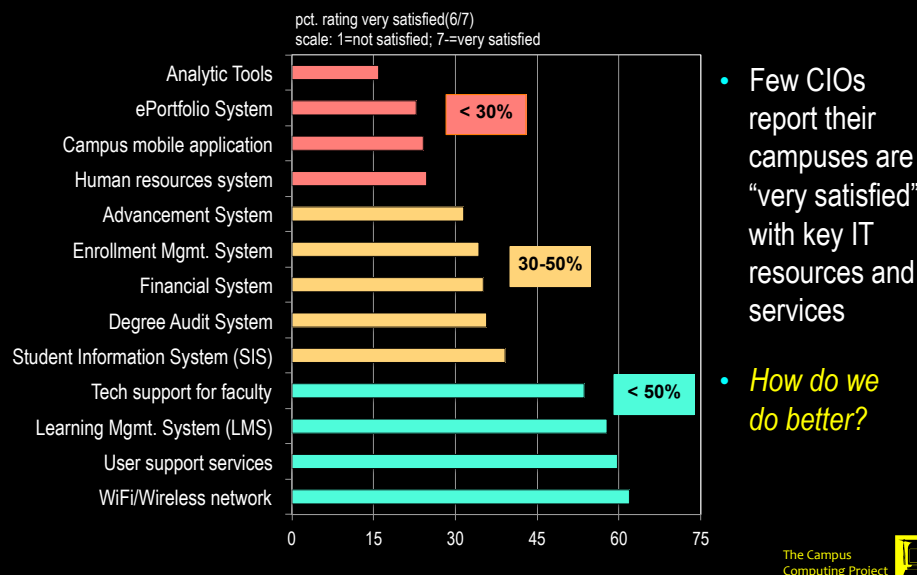
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## CIOs Rate the Effectiveness of Campus Investments in Information Technology, Fall 2016



## Campus Satisfaction with Key IT Resources and Services, Fall 2016

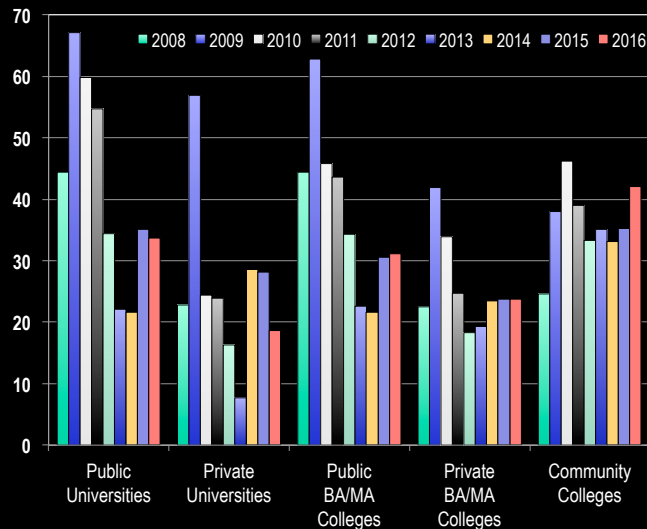


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## Budget Cuts, 2008-2016

percentage of institutions reporting budget reductions for central IT services over prior year funding, 2008-2015



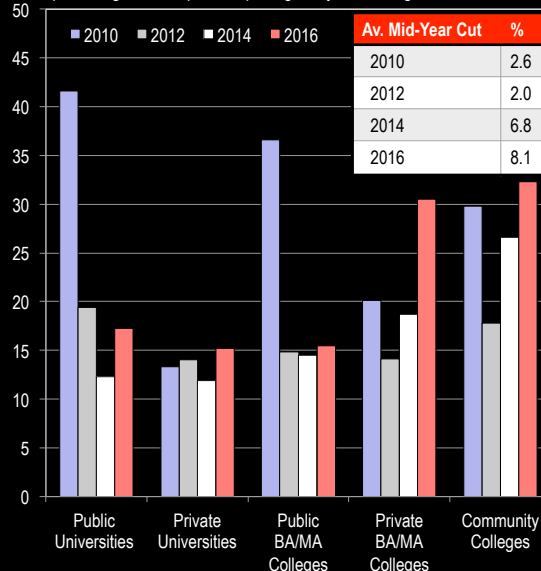
- Still experiencing the compounding consequences of continuing budget cuts
- Community Colleges really suffering: 42% had budget cuts in 2016
- Almost a fourth of institutions (24%) experienced mid-year IT budget cuts, averaging 8%

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## Mid-Year Budget Cuts

percentages of campuses reporting mid-year IT budget cuts



Avg. Mid-Year Cut	%
2010	2.6
2012	2.0
2014	6.8
2016	8.1

- Mid-year budget cuts continue.
- The size of the mid-year cuts are rising
- BA/MA institutions and community colleges most affected by mid-year cuts.

The compounding consequences of annual and mid-year cuts are significant.

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## Budget Cuts vs. Budget Gains, Fall 2016

percentage of institutions reporting budget increases or cuts, by budget category, fall 2015	Increase	Decrease
<b>Total Budget, Central IT</b>	33.3 ↓	27.5 ↓
<b>Wireless Networks</b>	48.6 ↓	8.3 ↑
<b>User Training and Support</b>	16.0 ↓	14.5 ↓
<b>ERP Software and Services</b>	44.9 ↑	5.1
<b>Mobile Computing Resources</b>	30.2 ↓	5.1 ↓
<b>IT Security Issues and Resources</b>	55.8 ↑	4.4 ↓
<b>Cloud Computing</b>	42.0 ↑	5.4 ↓
<b>Professional Development for IT Staff</b>	16.3 ↓	23.9 ↓
<b>Business Analytics</b>	35.1	7.4 ↓

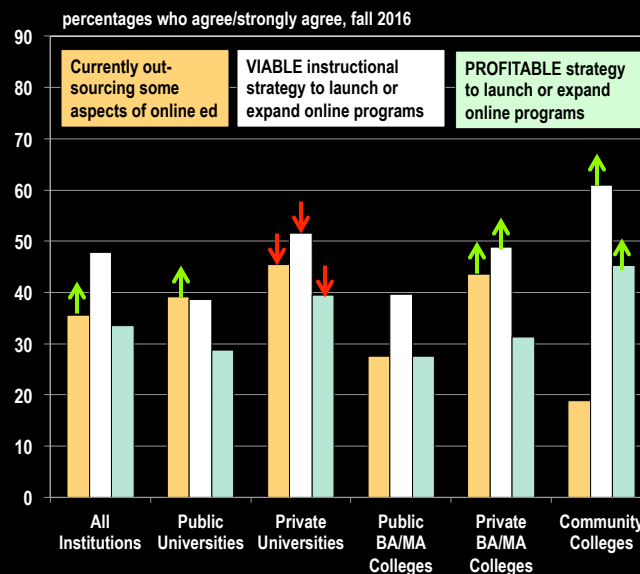
↑ Increase in 2016 ↓ Decrease in 2016

- Investing in wireless, security, cloud, mobility & analytics
- Reduced spending in public labs and for replacement hardware
- Student lab computer replacement cycle now 4-5 years (73%) vs. 2-3 years (55%) in 2008

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## Outsourcing Instructional Services for Online Programs?



↓ ↑ plus or minus 4% over 2015

- Some interesting changes since 2015.
- Outsourcing viewed as more effective for instruction than for profits.
- Declining enthusiasm in pvt. universities as others show more support.

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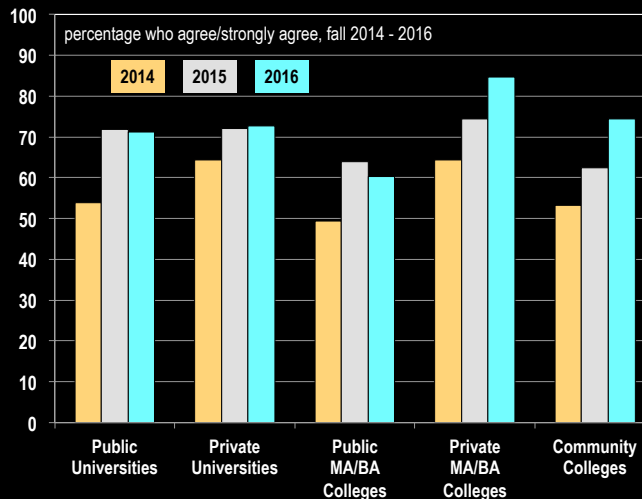


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## Is the Cloud Secure?

**“Cloud computing services offer a level of security and reliability that equals or exceeds on-campus hosting”**



**Rising confidence in IT security from Cloud providers.**

**But ...**

- A small number (7%) had a cloud security problem this past year (15% in public universities)
- A fourth (26%) report “high concern” for a cloud security incident in the coming year (up from 21% in 2015)

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## High Performance Computing

**73% agree/strongly agree**

Third party Cloud services (Amazon, Google, IBM, Microsoft) are an important part of our campus plan to offer high performance computing.

**60% agree/strongly agree**

The use of third-party Cloud services (Amazon, Google, IBM, Microsoft) by our faculty and researchers poses a potential risk to data privacy and data security.

Clear concerns about the risks and rewards of third-party Cloud services

- **REWARDS:** cost, convenience, and capacity.
- **RISKS:** control, security, privacy, and culpability.

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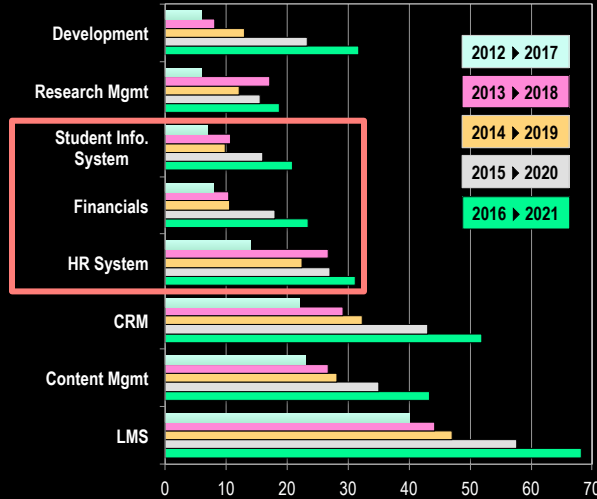
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## Still No Mass Movement to the Cloud for ERP by 2021

It is very likely that my campus will move to a Cloud/SaaS ERP Solution in five years

scale: 1=not likely; 7=very likely; percentage for very likely (6/7)



*Some gains in 2016, but most CIOs still don't see "high cloud" applications coming soon to their campuses*

### WHY?

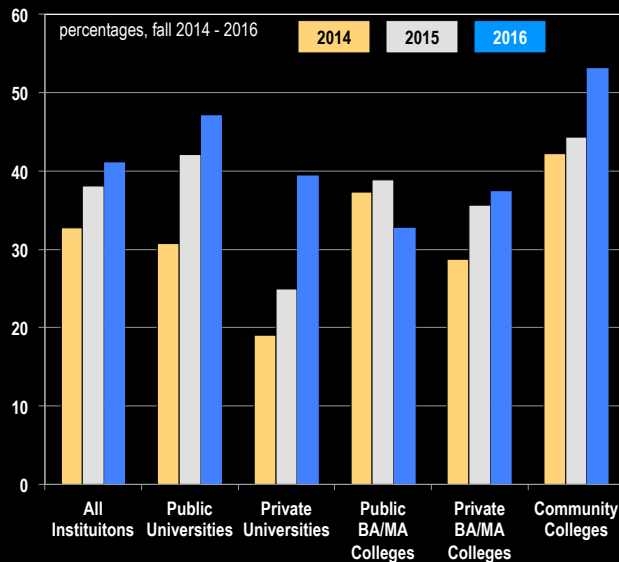
- Absence of clear path from ERP providers
- Can't visualize moving to Cloud
- Want to retain command and control
- Let others make the journey first

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## Campus Policy Encouraging Faculty to Use OER Content for Courses

8 in 10 (79%) report OER will be an important source of course content in 5 years.



- 7% of courses now using OER materials
- Small gains in formal institutional support for the use of OER course materials
- **BIG ISSUE:** Faculty concern about quality, ancillaries, and updates
- **LOOMING LARGE:** Faculty choice of instructional content

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## *Hot Spots*

# Attention Must Be Paid

- Hiring and Retaining IT Talent
- Money Matters
- Analytics
- “Going Digital”

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## Hiring and Retaining IT Talent

**Personnel are an essential part of the institutional IT infrastructure.**

- Hiring and retaining IT talent is a top IT priority
- Campus salaries are not competitive with off-campus opportunities for IT talent.
- Many institutions reducing support for professional development.
- Many campuses still reeling from the impact of the budget cuts from the Recession.

Investments in IT personnel are as critical as the financial investment in other key components of the campus IT infrastructure.

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## “Going Digital”

CIOs & IT officers are far more optimistic about the benefits of digital curricular resources than faculty.

percentage who agree/strongly agree	CIOs	Faculty
Digital curricular resources provide a richer learning experience than traditional print materials.	88	35
Our “Going Digital” efforts are impeded because not all our students have access to computers or tablets.	30	28

Source: 2016 Campus Computing Survey  
2016 Going Digital Survey of 2900 Faculty

- Faculty are far less sanguine about “going digital” than CIOs
- Need for evidence about the actual impact of “going digital”

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## IT Budgets and Money Matters

IT units – and by extension colleges and universities – are suffering from the compounding consequences of budget cuts over the past 7 years.

% of campuses	Budget Cut	Mid-Year Cut
2010	41.6	28.1
2012	27.0	15.8
2014	22.6	18.3
2016	29.5	24.7

Agree/strongly agree	%
Senior leadership understands the value of investments in IT infrastructure	90
Faculty strongly support the role of IT to enhance teaching and instruction	84
Our IT funding has not recovered from budget cuts over the past 4-6 years	63

- Impact on infrastructure, resources, services, and personnel
- Continuing consequences for instruction, research, and services
- **What’s the campus plan to fix IT funding?**

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## Analytic Angst

Current tools, resources, and efforts are currently far short of campus needs and expectations.

The Priorities (pct. very important)	%
Leveraging IT for the campus completion agenda (#5)	76
Data analysis / managerial and learning analytics (#8)	61

The Current Assessment	%
Investment in analytics: very effective	24.0
Learning analytics: rated excellent	6.5
Campus is "very satisfied" with analytic tools	15.9

- Not yet delivering on actual, implied, and inferred potential and promises of analytics
- Critical roles of trustworthy data, effective analytic tools, and thoughtful training

**Use data as a resource, not as a weapon**

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## Analytics and IT Leadership

The question here no longer concerns if information technology has a role to play in the campus conversations and public discussions about assessment and outcomes. Rather, the issue before us in the wake of the [2006] Spellings Commission report concerns **when will college and university IT leaders assume an active role, a leadership role, in these discussions, bringing their IT resources and expertise—bringing data, information, and insight—to the critical planning and policy discussions about institutional assessment and outcomes** that affect all sectors of U.S. higher education.



**Bring Data**  
 Kenneth C Green  
 EDUCAUSE Review, Sept, 2006



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