

An overhead photograph of four students sitting on red beanbag chairs in a circle, engaged in a study session. One student is using a laptop, another is writing in a notebook, and two others are looking at a book. A black backpack is on the floor next to them.

The 2010 21st-Century Campus Report: Campus 2.0

July 19, 2010

Study Focus and Objectives

Now in its third year, the CDW-G 21st-Century Campus Report examines the role of technology in higher education. CDW-G surveyed more than 1,000 college **students, faculty** and **Information Technology (IT) staff members** to understand their perceptions of campus technology.

While the 2008 report provided a baseline for campus technology use and the 2009 study examined how student needs are changing, the 2010 report focuses on **what colleges are getting right**, how they are incorporating new tools into **interactive learning experiences**.

CDW-G also compares these findings to the results of the recent [CDW-G 21st-Century Classroom Report](#), to determine how the **expectations of today's high school students** will further advance the 21st-century campus.



Key Findings

- ▶ **Higher education faculty and IT staff continue to place a high priority on technology**
 - 88% of faculty say technology is essential to success in their class and a useful tool for students
 - 72% of IT professionals believe their institution understands how faculty wants to use technology as a teaching tool

- ▶ **Many institutions are successfully integrating new technology that empowers students and faculty to personalize and expand the learning experience**
 - 70% offer digital content; 61% offer virtual learning opportunities; 58% offer online collaboration software
 - Three out of four students say colleges understand how they want to use technology as a learning tool

- ▶ **But defining – and supporting – the new learning environment is a challenge**
 - Compared to faculty, IT sees the opportunity to bring a greater variety of technology to the 21st-century classroom
 - 44% of IT staff say their IT infrastructure needs to be refreshed, particularly in the areas of storage and security

- ▶ **The next class of college students has even higher expectations for technology**
 - 63% of current college students say technology on campus was important in their college selection criteria
 - 93% of today's high school students* say campus technology is important in their college selection criteria
 - 95% of today's high school students expect to use technology in college during all or some classes

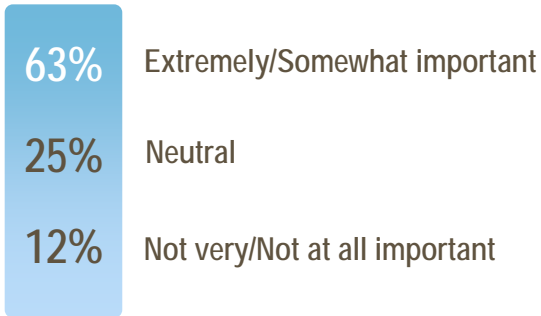
*K-12 education data comes from the CDW-G 2010 21st-Century Classroom Report

What Students Expect – Today and Tomorrow

Students Have High Expectations

- ▶ Current college students confirm they considered technology offerings in their college selection criteria and had high expectations for how they would use it

How important was an institution's technology offerings in your college selection process?



Top five technologies extremely important to today's college students:

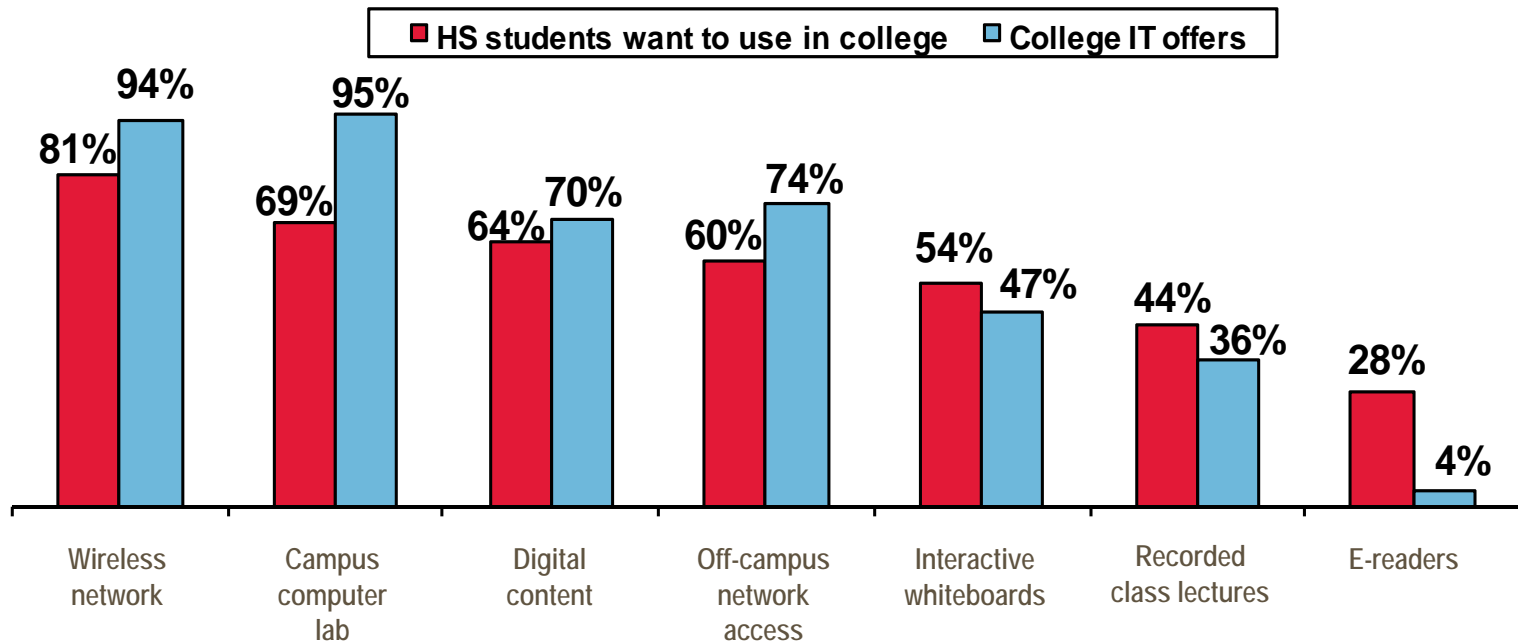
Wireless network	77%
Accessing the campus' network from an off-campus location	57%
Course management system	47%
Digital content*	40%
Multimedia content streaming	23%

*E.g., online textbooks, material available online for download including PDF documents, notes and other curricular materials in electronic form

K-12 Call Out: 93% of high school students say an institution's technology offerings are important to their college selection process

Colleges Are Expected to Deliver

- ▶ Institutions offer the core technologies that tomorrow's college students expect
- ▶ But IT needs to consider how it will meet students' demand for newer technologies as a learning tool



Student Expectations Will Not Diminish

- ▶ The Millennial Generation will continue to enter college for another 10 years, bringing with them a growing list of technology expectations

High school students expect to use technology in college:

How*?	
To complete class assignments	94%
To communicate with classmates	82%
To communicate with professors	84%
To prepare for the technology expectations in my chosen field	70%

When**?	
During every class	39%
During some classes	56%
Not in class – only outside of class	5%
Not at all	0%

*Respondents asked to select all that apply **Respondents asked to select one

What's Working with Technology on Campus

Campuses Are Focused on Technology

- ▶ College students, faculty and IT staff place a high value on technology as a learning tool

85% of **college students** say technology is important in their ability to study for their major/chosen field

88% of **faculty** say technology is essential or useful as a learning tool

“The technology-rich environment provides far greater opportunity to teach material in varied and interesting ways.”
– *College faculty*

IT Agrees Campuses Are on Track:

79% of IT professionals believe their campus understands how students want to use technology and
72% believe their campus understands how faculty want to use technology

K-12 Call Out: 84% of high school students say technology is important to their ability to study/work on assignments

Better Tech Opportunities for Tomorrow

- ▶ Colleges are increasingly supporting advanced technology infrastructure and applications

Institutions Support*:

Access	2010	2009
Videoconferencing	61%	47%
Web conferencing	55%	46%
Online chat	32%	25%
Open source apps**	38%	N/A

Hardware	2010	2009
Laptops	81%	72%
Interactive whiteboards	43%	38%
Student response systems	34%	34%
Smart phones	50%	46%

Content	2010	2009
Digital content**	54%	N/A
Podcasts	35%	31%

*IT professionals support

**New to 2010 survey; digital content includes online textbooks, material available online for download including PDF documents, notes and other curricular materials in electronic form

Classrooms Are No Longer Just Four Walls

- ▶ Virtual learning, which delivers education to students regardless of where the professor or even other students are located, is on the rise – opening the door to a host of new learning experiences

Virtual learning by the numbers:

- 61%** of institutions offer virtual learning*
- 53%** of students have taken a class that offers virtual learning**

What are the benefits of virtual learning?

	Faculty	Students
Provides the opportunity for professional adults to take classes while working full-time	68%	54%
Increases the variety of classes students can take	46%	42%
Gives students the opportunity to study with a broader variety of faculty	37%	31%

*According to IT professionals

**According to students

Digital Content Offers New Possibilities

- ▶ Digital content, online textbooks and e-text* offer institutions the opportunity to augment – or even replace – traditional print textbooks
- ▶ 62% of faculty use digital content in conjunction with teaching. Nearly all see benefits to digital content as a textbook alternative

Perceived Benefits

According to Faculty:

Cost savings for students	74%
Instant access to content	53%
Access to most current content	49%

According to Students:

Cost savings for students	81%
Instant access to content	65%
Ease of note taking	38%

Challenges

According to Students:

Some students prefer print material	68%
Faculty reluctance to move to digital or online textbooks	51%
Affordability of the digital textbook device	47%

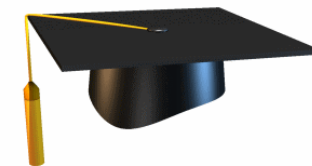
“Technology opens up new experiences for learning and gives more information than just using a textbook. Students can be more hands on with technology.” – College student

*E.g., online textbooks, material available online for download including PDF documents, notes and other curricular materials in electronic form

Collaboration Means Education

- ▶ More than half of students use social media – including Facebook, Twitter, blogs and wikis – as an educational tool to enable real-time dialogue, collaboration and content sharing with classmates

- 64%** use social media to connect with classmates to study or work on class assignments at least several times per month
- 41%** use social media to study or work on class assignments at least several times per month
- 27%** use social media to connect with faculty to study or work on class assignments at least several times per month



K-12 Call Out: 76% of high school students say they are using social media as an educational tool

Faculty Are Engaged

- ▶ Three out of four students say their college/university understands how they use or want to use technology as a learning tool
- ▶ Faculty are exploring the technology that students use in their personal lives – and are bringing it into the classroom

Faculty: Which of the following technologies/Internet tools do you use in conjunction with teaching?

Digital content	62%
Wikis/blogs	23%
Online text or video chat	19%
Podcasts/vodcasts	12%
Social networking	10%
MP3 player	8%

Faculty: How do you integrate technology into your classes?

“Record lectures in MP3 format; have online interactive practice quizzes; hold live online review sessions before exams that are recorded for students who cannot attend the live session.”

“Electronic textbooks and supplemental materials including dry-run and practice online labs, such as virtual anatomy, virtual lectures.”

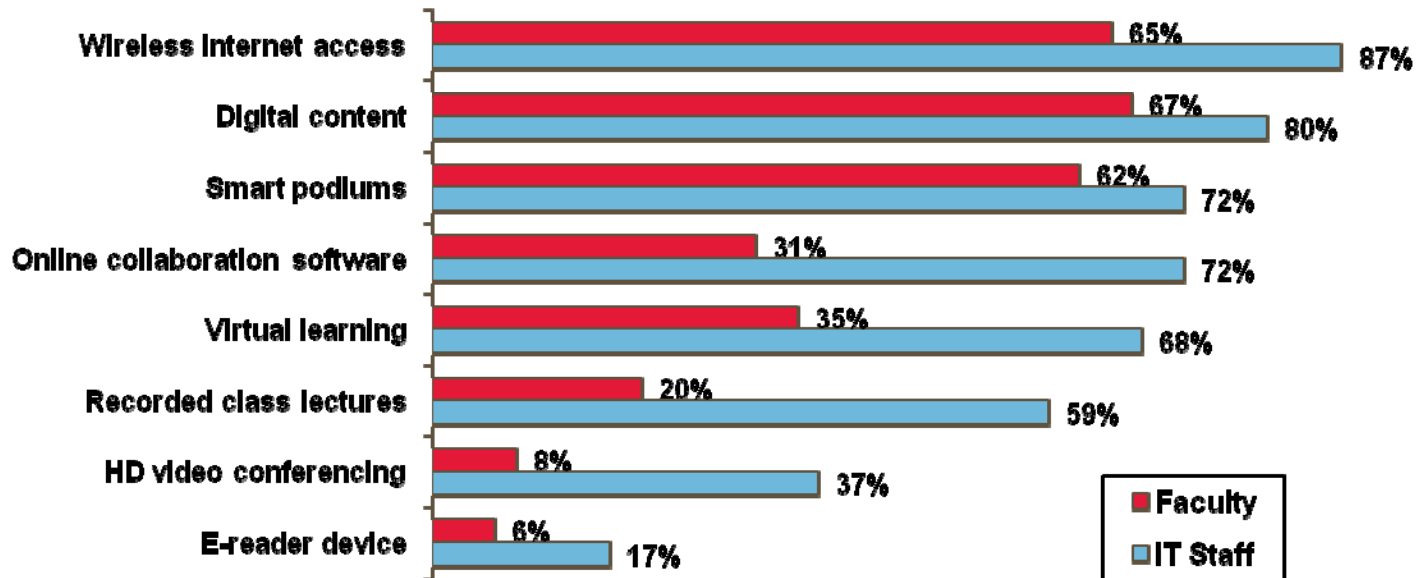
K-12 Call Out: Less than half of high school students say that their school understands how they want to use technology as a learning tool

Campus Technology Challenges

Different Views on Essential Technology

- ▶ More than 3/4 of faculty say it is important that they teach in a 21st-century classroom
- ▶ But when it comes to the essential technology – and new technology – for the classroom, IT staff have an expanded view of what is possible

“Essential” elements of the 21st-century classroom, according to faculty and IT staff



More Professional Development Needed

- ▶ Students, faculty and IT professionals continue to see lack of budget and lack of professor tech knowledge as the biggest challenges to technology integration

What is the biggest impediment to classroom technology on your campus? Please select one.

Faculty*	
Lack of budget	26%
Professors don't know how to use it	18%
Lack of technical support, which means technology does not always work	14%

*New question for faculty in 2010

Students	
My professors don't know how to use it*	24%
Lack of technical support, which means technology does not always work	16%
My campus does not have enough technology to adequately serve students	14%
Professors won't use it	14%

*Students' top challenge unchanged from 2009 to 2010

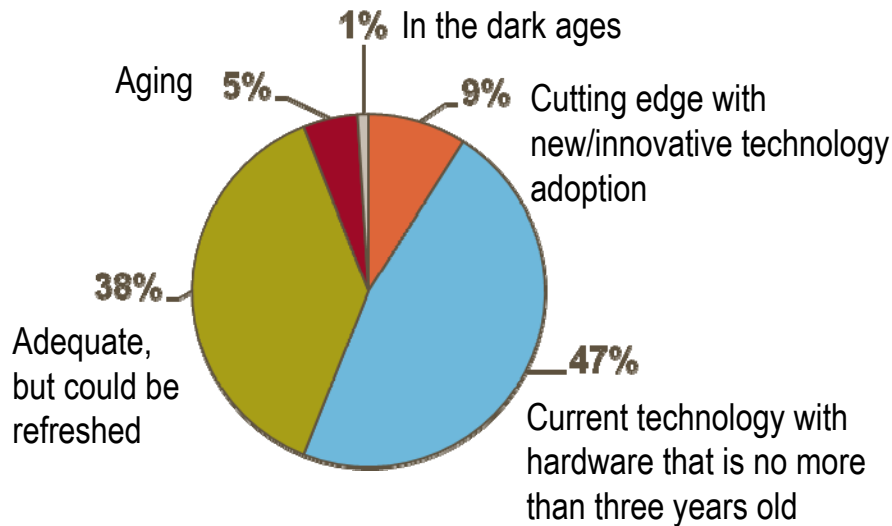
IT Professionals*	
Lack of budget	39%
Professors don't know how to use it	26%
Professors won't use it	18%

*IT challenges unchanged from 2009 to 2010

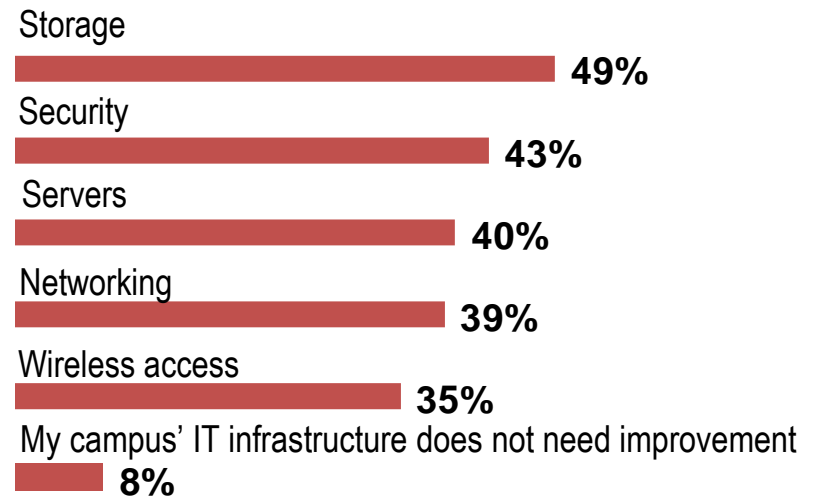
IT Infrastructure Needs Support

- ▶ 44% of campus IT professionals believe their infrastructure needs to be or could be refreshed
- ▶ To provide stakeholders with reliable, “always on” access to 21st-century technology, IT professionals highlight storage and security as their biggest needs

How would you rate your campus' IT infrastructure?



To provide reliable, “always on” access to 21st-century campus technologies, which of the following IT infrastructure components does your campus need to improve or expand?*



*Respondents asked to select all that apply

Workforce Prep Not Improving

- ▶ Though campuses are trying new technologies and integrating these tools into the classroom, career preparation is not improving

70%

of high school students expect college to prepare them to use technology in their chosen field

and

85%

of college students say technology is important for their field of study

but...

Higher Education Faculty:

My institution is preparing students to use technology as a business/professional tool in the workforce

	2009	2010
Strongly Agree/Agree	74%	67%

College Students:

My institution is preparing me to use technology as a business/professional tool in the workforce

	2009	2010
Strongly Agree/Agree	82%	76%

What's Next: Faculty and Students Share Lessons Learned

Faculty Share Lessons Learned

Faculty: Thinking about how your use of technology as a teaching tool has evolved in the last five years, what “lessons learned” can you share with your peers?



“The only way to incorporate technology as a teaching tool is to use it, make mistakes, and finally, through practice, become comfortable with it.”

“Students don't need to be taught how to use technology. They need to see it modeled and be shown how it can impact and greatly improve their lives. They'll learn the *how* on their own.”

“Technology – especially the Web – has reinvigorated my teaching. Of the 28 years that I've taught at my current institution, roughly half of them have been with the Web. I think I've been a better teacher because I've been more interested.”

“It is very easy to go too fast. It is essential to monitor student understanding with technology.”

“The greater the interactive technology available to students, and the richer the media, the more effective the learning.”

Students Share Their Vision

Students: What is your vision for how students should use technology in college?

“Students should be able to bring their laptops to class and should be able to receive notes via their phones.”

“Technology should exist to supplement a classroom, not replace it. Instead of whole lectures, teachers should post additional content (e.g., helpful readings, extra problems) so that students are still motivated to pay attention in the classroom.”

“Technology enables students to reach new levels of connectedness to their professors, bosses, peers and families during a time that is incredibly demanding of our time and energy. Technology should enhance students' ability to stay on top of their work in a dynamic, ever-changing environment.”

“Ideally, each student should be able to customize their own individual technological educational experience.”



Call to Action

- ▶ Understand that technology means different things to different people and different generations:
 - Move beyond just having technology to understanding how technology can change the learning process

- ▶ Survey students, faculty and IT staff to understand their expectations for technology use:
 - The 21st-Century Campus Report Assessment Tool is available at www.cdwg.com/21stCenturyCampus, and provides a starting point for institutions to evaluate the community's needs and disaggregate data to develop a path forward

- ▶ Consider demonstration labs to give faculty and IT staff hands-on experience with newer technologies:
 - Watch Millennials' tech habits; consider how institutions can support and integrate their tools into the learning process

Methodology

- ▶ CDW-G hired O’Keeffe & Company to conduct an online survey of college students, faculty and IT staff in June 2010
- ▶ Sample Size and Margin of Error:
 - 1,019 total respondents: +/- 3.0% margin of error at a 95% confidence level
 - 415 Students: +/- 4.8% margin of error at a 95% confidence level
 - 303 Faculty: +/- 5.6% margin of error at a 95% confidence level
 - 301 IT Staff: +/- 5.6% margin of error at 95% confidence level

Type of Institution	Students	Faculty	IT Staff
Public School	58%	50%	50%
Private School	26%	30%	36%
Community College/Vocational-Technical School	16%	20%	14%

Size of Institution	Students	Faculty	IT Staff
Less than 2,500 students	10%	14%	14%
2,500-9,999 students	35%	28%	26%
10,000-24,999 students	25%	28%	28%
25,000 students or more	30%	30%	32%

Thank you.

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