



# The Challenges of the Mobile Campus and New Opportunities for Learning

*Mobile technologies have been transforming college and university campuses at an accelerated rate over the last decade. For many institutions, the pace and scale of the paradigm shift—from students and faculty using primarily institution-owned computers for teaching, working and learning to a primarily bring-your-own-technology, work-anywhere environment—has brought a host of challenges, along with significant potential for new learning opportunities.*

*To explore this topic, University Business and Citrix conducted a survey of higher education leaders<sup>1</sup> about the challenges and opportunities brought by mobile technologies on campus, the expectations of students, faculty and staff when it comes to access to technology, and the current capabilities of institutions in meeting these expectations.*

It's no secret that college students today use mobile technologies. What may be surprising is the extent to which mobile devices have permeated college and university campuses. A recent survey found that some 89 percent of students owned a laptop computer, 76 percent

owned a smartphone, 43 percent owned a desktop computer, 31 percent owned a tablet and 16 percent owned an e-reader. Furthermore, some 58 percent of students said they owned three or more mobile devices.

These devices are much more than tools for accessing social media, texting or other nonacademic functions, however; 76 percent of students value mobile technologies because they help to achieve academic outcomes, 76 percent say they help to prepare for future educational plans, and 61 percent of students feel that these technologies help them prepare for the workplace.

In addition, a significant majority of students say technology makes them feel more connected to their institution (64 percent), their professors (60 percent), and other students (53 percent).

Despite valuing mobile technologies for academic and career readiness purposes and feeling more connected to their college or university, students also say they are often stymied by the policies and limited capabilities of their institution; 74 percent of students said the use of smartphones in class is banned or discouraged at their school.<sup>2</sup>

## Struggling to meet expectations

Statistics like these outline certain aspects of the technology landscape of higher ed today and serve as the setting in which *University Business* conducted this survey. When asked about the mobile devices which students are using, higher ed leaders in the UB survey overwhelmingly agreed that students should have the flexibility to use a variety of technologies as they so choose. Some 94 percent agreed with the statement: “Students today should be able to remotely access all the information, data and software they need, on any device, at any time, and with a consistent user experience.”

However, when asked if their institution provided this level of access, 55 percent said that it did not. This illustrates one of the main challenges identified by the survey; that institutions are struggling to bridge the gap between the expectations of students, faculty and administration, and the technical capabilities of the institution to provide this access.

When asked to be more specific as to why their institution did not provide this level of remote access to applications, responses were fairly evenly distributed across six statements, of which respondents could choose as many as were accurate. The largest percentage of respondents (61.3 percent) chose the statement “We don’t have the budget or staff to provide this level of service.” 37.8 percent said “Many software programs simply cannot be used remotely,” 34 percent said “Our network infrastructure couldn’t support that level of remote access,” 21.2 percent said “We don’t have the expertise to provide this level of service,” and 11.8 percent said “It’s just too difficult to get major new technology initiatives adopted.”

Taken together, these responses clearly illustrate a need for a robust solution specifically designed to provide campus users with remote access to software applications, but in a way that addresses these common limitations of many colleges and universities when it comes to IT staff, infrastructure and budget.



## Resource-intensive applications

With the advent of the mobile age, responsive web design and mobile app development rapidly becoming the cornerstone of a software strategy, the survey also touched on the effect of these trends on higher ed. When asked if their institution is currently taking a “mobile first” approach to developing or providing applications to campus users, 84 percent said their institution does not take this approach. It is possible that the aforementioned reasons for not providing remote access to all applications—lack of adequate budget, staff, expertise and infrastructure—apply here as well.

The survey also identified a certain class of software used by a significant portion of campus users: resource-intensive applications requiring high levels of processing power and memory. These include design, art, statistical analysis, photography and other programs often required in related courses. When asked to estimate the percentage of students and faculty at their institution that requires access to these types of applications, 39 percent said it was less than 50 percent, 15 percent said between

50 and 60 percent, 9.4 percent said 60 to 80 percent and 6 percent said more than 80 percent of users needed access to these applications.

Given the resource-intensive nature of these applications, it is perhaps no surprise that when asked where users access these programs, the vast majority (88.8 percent) said “Institution-owned computers in labs, libraries, etc.,” while 54.2 percent said “Personal computers in certain campus locations,” 51.7 percent said “Personal computers anywhere,” 41.7 percent said “Tablets via WiFi” and just 36.4 percent said “Smartphones via WiFi or cellular data network.”

### Need for a unique solution

In conclusion, respondents were asked if it would be helpful to be able to provide all students and faculty with secure, seamless access to these applications anytime, anywhere and from any device or operating system. 57.1 percent said it would be “Very helpful,” 26.5 percent said “Somewhat helpful,” and 13 percent said “Helpful,” for a total of 96.6 percent of respondents saying that this capa-

bility would be helpful. Just 3.4 percent said this capability would not be helpful to their institution.

Taken as a whole, this survey articulated a wide disparity between the expectations of campus users and the capabilities of many institutions in meeting those expectations when it comes to mobile technologies and remote access to applications. However, the solution to closing this gap is not just a question of developing a platform with these capabilities; the unique characteristics of higher education require that such a solution succeed in an environment of finite resources, particularly in terms of IT budgets, staff, infrastructure and expertise.

*As the leader in Mobile Workspaces, Citrix offers a unique solution that can help colleges and universities to address these challenges. Mobile Workspaces provide students, faculty and staff with on-demand, secure access to the apps, data and services they require, expanding beyond traditional methods to promote independent and exploratory learning – without compromising security or compliance.*

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For more information on how Citrix solutions for education can benefit your institution, please visit **[citrix.com/education](http://citrix.com/education)**

<sup>1</sup>Some 567 higher education leaders from across the country responded to the 8-question multiple choice survey.

<sup>2</sup>Educause Center for Analysis and Research, ECAR Study of Undergraduate Students and Information Technology, 2013, [www.educause.edu/ecar-student-2013](http://www.educause.edu/ecar-student-2013)).