

The Impact of Mobilization in Higher Education

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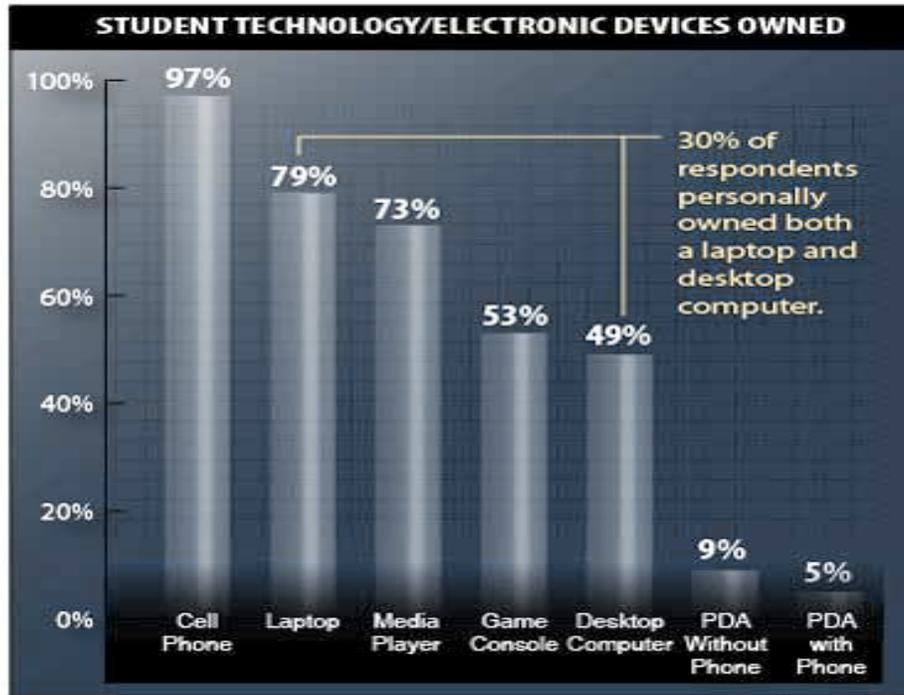
In the New Media Consortium's Horizon Project 2011 regarding the Six Emerging Technologies impacting Higher Education, mobilization (mobile computing and devices of smart phones, tablets, and mobile apps) was ranked number one. Mobilization provides an opportunity for institutions of higher education to deliver education and student services “*On Demand and In Students’ Hands*” (a motto coined by the Tennessee Board of Regents). Due to the high percentage of college students that have mobile devices the educational opportunities of mobilization are yet to be discovered in transforming higher education from recruiting, teaching, learning, delivery, communication, social interactions, and campus operations.

Tim Flood, a leader of mobile initiatives and the key administrator of the Stanford University's iStanford project, encourages institutions to move more quickly on mobile. “The big opportunity mobile affords any higher education institution is in applying this technology so that the institution is relevant to students, to their parents, to the faculty, increasingly to the staff, to the alumni... and so on. There really isn't one application area that's more important or offers greater opportunities than others, but there are so many good examples. You can take almost any aspect of teaching, learning, administration, or research and turn that into a productive mobile

services and app in how to get around campus, what's going on around campus, what's the latest research finding published by campus researchers, etc.” (Grush, 2012).

Patrick Laughran (2011) stated that, “an increasing number of higher education institutions have accepted a “mobile obligation” to augment a student’s curricular and co-curricular experience by literally meeting them where they are with the information and technology services most often used. For example, according to results from the 2011 Campus Computing Project 55.3% of public universities have activated mobile apps or will do so during the 2011-12 academic year (compared to 32.5% in 2010). The question for the other 44.7% is... if not now when?”

Kenneth C. Green, founding director of The Campus Computing Project, commented that, “Colleges and universities are playing catch-up with the consumer experience. Students come to campus expecting to use mobile apps on their smartphones and tablets to navigate campus resources and use campus services. Also important is that compared to a year ago, more firms – both LMS and ERP providers – now offer mobile options for their campus clients and technology providers now offer free mobile apps, which means that the options for and cost of going mobile have changed dramatically in the past year.”



Eduventures (2008) found that 97 percent of U.S. college students own a cell phone, and 79 percent own a mobile computer. Ball State (2010) found that 99.8% of college students had a cell phone.

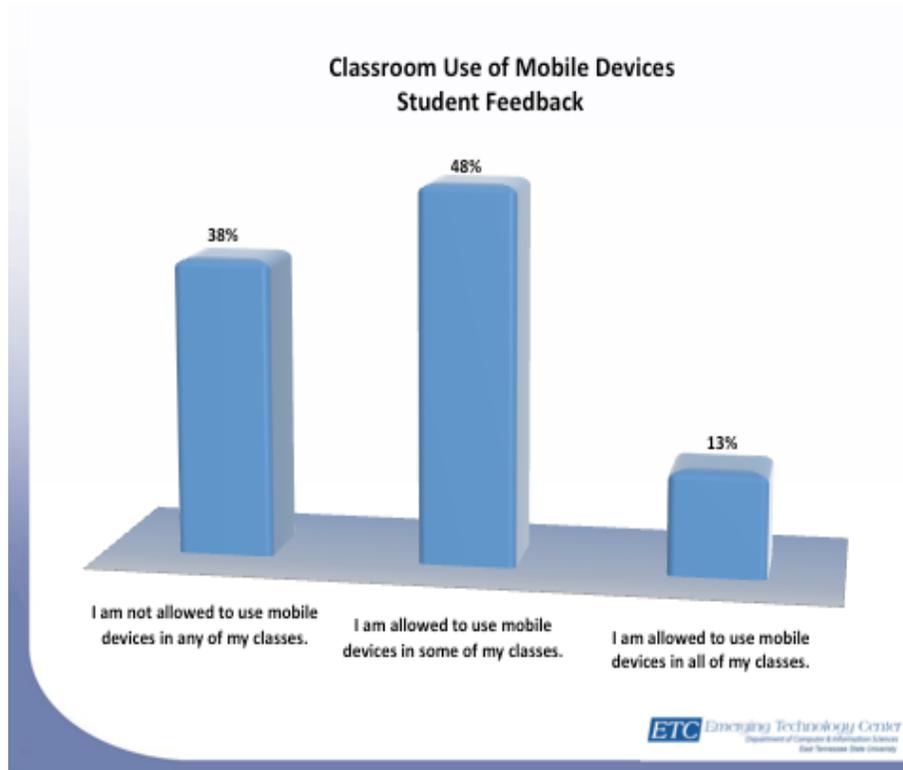
Students carry their mobile devices; especially their phones, with them at all times. Infographic Study, (2010,) revealed that, “From the moment they wake up to the moment they go to bed, students are constantly connected to their electronics, syncing their tablets and smartphones with all the latest updates that came in while they caught their precious shuteye. 83% of young people sleep next to their cell phones; 35% boot-up apps before getting out of bed; 40% use their devices in the bathroom; 70% of college students take notes on their mobile devices; 51% of people do online research as part of their job; 60% of TV viewers use a computer/mobile device at the same time; 50% of Americans prefer communicating to face-to-face conversation” (Indvik, 2010).

Mobile devices are quickly becoming students' first choice for accessing the Internet and making use of an expanding array of communications services, interactive media, and software applications. The latest wireless survey findings in 2011 by CITA in terms of the impact of mobilization for higher education was, "Instead of students just talking on their cell phones, students are now making use of many of the extras features that these smart phones and tablets are designed to provide such as browsing the Web, sending e-mail and text messages, and entertainment." Thus, the growing trend of college students using their mobile devices as educational and learning tools is fast becoming the norm on college campuses.

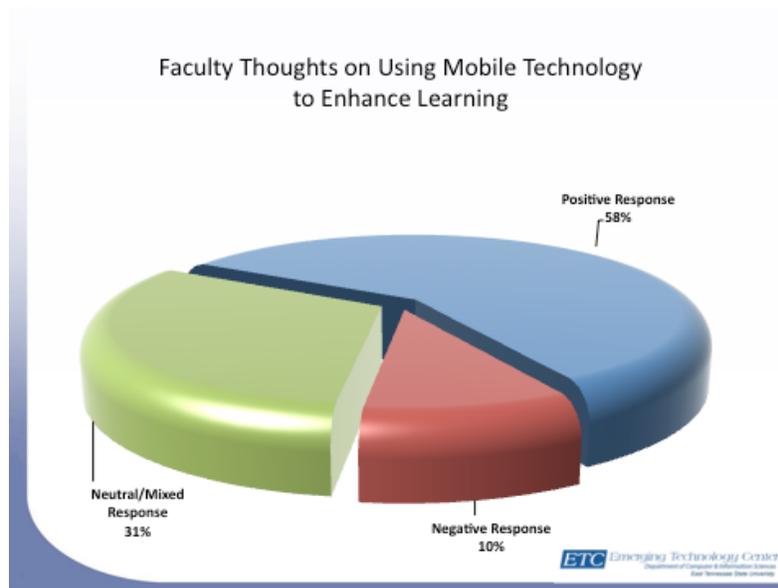
Impact of Mobilization on Higher Education Faculty

Unlike college students, higher education faculty members lag significantly behind in the use of mobile devices for teaching and learning. In 2011, East Tennessee State University (ETSU) conducted a campus study to determine (1) if faculty and students were using mobile devices for teaching and learning, (2) the types of mobile device, their attitudes regarding the use of mobile devices in education, and (3) how they utilized mobile devices in the classroom. The findings revealed significant differences between faculty and students' attitudes, ownership, and classroom use of mobile devices:

In terms of ownership of a mobile device, more students owned mobile devices versus the faculty. In terms of type of mobile device ownership, students owned more Androids, whereas the faculty owned more Apple Mobile Devices. In terms of actual utilization of mobile devices in the classroom, only 13% of the students surveyed noted that they were able to use their mobile devices in all of their classes compared to 38% that noted they were not able to use mobile devices in any of their classes.



Most noteworthy, were the differences in positive attitudes regarding the use of mobilization for teaching and learning between the students and faculty. Students noted more positive thoughts (74%) versus those of the faculty (58%). According to other studies regarding faculty's attitudes and utilization of mobile devices, there is a low percentage of faculty members taking advantage of the educational opportunity of mobilization.



Educational Benefits of Mobilization for Higher Education

Dr. Tracey Wilen-Daugenti, IBSG Higher Education Practice, highlighted some of the positive results of mobile technology, “Mobile devices is also increasing the productivity of faculty members because they no longer need to go to their offices to set up meetings on their calendars, make phone calls, or use email to respond to student questions. Many professors use mobile devices to notify students of class updates, conduct quick quizzes or polls, and submit data while doing classroom fieldwork. Furthermore, Flood (2010) detailed other possible benefits of mobilization for higher education:

- Tablets are easily adaptable to almost any learning environment, with tens of thousands of educational applications emerging as part of a new software distribution model.
- As a one-to-one solution, tablets present an economic, flexible alternative to laptops and desktops due to their lower cost, greater portability, and access to apps.
- Tablets are conducive to engaging in learning outside the classroom, with a suite of

tools for capturing data in real-time and collaborating on projects.

- Mobile apps offer some of the most accessible, convenient, and engaging ways for people to interact with the kind of campus information that means something to them.

Current Issues and Challenges of Mobilization Impacting Higher Education

As noted, mobilization is transforming all areas of higher education. This transformation is causing several issues and challenges for higher education. Outlined below are some of the major areas being addressed by higher education organizations across the nation:

- **Teaching and Learning with Mobile Devices**

“The following questions framed the issues of mobilization for teaching and learning: What are the technology affordances of mobile devices for teaching and learning in higher education? What pedagogical strategies facilitate the use of mobile learning devices in authentic learning environments in higher education? What pedagogical principles facilitate the use of mobile learning devices in authentic learning environments in higher education?” (Herrington, Mantei, Herrington, Olney and Ferry, 2008).

- **IT Networking, Security, and Safety**

As colleges and universities contend with the need to increase controls around mobile devices, they need to devise security policies to plan for securing data on the employee’s device and for enforcing the policies effectively. Enterprise software that can manage the operating systems on all phones and tablets is not yet available. (Dunn, 2011)

- **Cloud Computing**

“The “cloud computing” trend of replacing software traditionally installed on campus computers (and the computers themselves) with applications delivered via the internet is driven by aims of reducing universities’ IT complexity and cost. While today’s “cloud powered” higher education institutions can gain significant flexibility and agility, the corresponding migration of their sensitive data into remote, worldwide data centers--the “cloud” itself--introduce profound legal, compliance, and political issues. This is particularly true in the university community, which, given the data members handle, can be subject to everything from financial regulations and insurance laws to export controls.” (Nicholson, 2009)

- **BYOD (Bring Your Own Device)**

Use of personally owned devices continues to grow on campuses. Schools are learning how to maneuver the balance of letting the user bring their own devices to campus for work and learning and supporting these devices all the while educating users about the possibilities these devices could put university networks and information at risk (diFilipo & Kondrach, 2011).

- **Student Services & Campus Operations**

Brian A. Rellinger (2011) noted that the growth in smartphone devices combined with the success of mobile applications has created new opportunities for universities to reach out to constituents. A common function at most universities is guided campus tours. A mobile application allows prospective students and parents to use their smartphone while walking around the campus.

- **Digital Content for Mobilization: textbooks & Mobile Apps**

Mobile is the future for content delivery. Colleges and universities need to establish a strategy now and make the decisions necessary to take advantage of this multimedia opportunity (Evans, 2011). One of the challenges that educators are encountering is the vast number of mobile apps and the need for tagging and aligning these apps for teaching and learning. The Tennessee Board of Regents created a Mobile Educational and Workforce App Resource Center to assist faculty in identifying mobile apps for their teaching discipline (over ninety-two disciplines) students' educational level (PreK-Ph.D.), and for their preferred device: www.tbrmobile.org

- **Faculty Training & Professional Development**

What are appropriate strategies for the professional development of higher education teachers in the pedagogical use of mobile learning devices? (Herrington, Mantei, Herrington, Olney and Ferry, 2008).

- **Effectiveness of Mobilization**

Abilene Christian University (ACU), one of the leading universities in pioneering the use of mobilization, is currently conducting several studies regarding the effectiveness of mobilization in improving teaching and learning. They have published several studies regarding the student engagement factor of mobilization.

Conclusions

Mobilization offers higher education new opportunities in providing students with “their own time” education and in “their own hands” using mobile devices. Higher Education must be positioned to address issues regarding the impact of mobilization, to collect data, identify

resources, offer professional development through webinars and presentation at conferences, to collaborate with educators across the globe, to participate in pilots, and most importantly, the opportunities to establish partnerships.

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