

POINT OF VIEW ON : THE BENEFITS OF IMPLEMENTING MOBILE LEARNING IN HIGHER EDUCATION

Faculty within Higher Education institutions are facing challenges that have altered the way in which learning has been delivered within the classroom. One of the major factors that has been intricate in changing the traditional mode of learning, is the COVID19 pandemic and its social distancing protocols. It was imperative that an alternative solution be implemented that will allow faculty and students continuous accessibility to learning materials when face-to-face sessions are unavailable. Although the production of “mobile technology” has advanced the mobile learning initiative, the following challenges questioned the validity of this device:

- Skepticism among faculty that is produced when instructors lack the level of skill that is needed to integrate technology into their teaching.
- Developing robust technology infrastructure to support mobile learning.
- Ensuring accessibility for all students.
- Keeping up with the increasing technological advancement.

Mobile Learning is described as a learning model that enables learners to access educational materials anywhere and anytime using mobile and internet technologies.

PROBLEM/OPPORTUNITY

Advanced technology has revolutionized the way in which learning is being implemented within higher education institutions. This new concept of learning is being utilized by a vast majority of students, however, its usage among faculty within higher education is being challenged by those who do not understand how to incorporate technology into the learning process. Due to the rapid changes that frequently occur within technology, it is not always easy to transition into mobile learning. Although these challenges exist, research has proven “mobile learning” is the catalyst that is igniting learning for the future.

NAME OF TOOL, APPROACH, TECHNOLOGY

What is it?	Mobile Learning via Smart Phone
What are the benefits?	<ul style="list-style-type: none"> ● Faculty and students, use these devices for sharing information, consulting dictionaries and thesaurus ● User-friendly learning paths. ● Cost-effectiveness. ● Without any limits in space and time. ● Feature of mobile learning that distinguishes it from other learning technologies is its mobility. ● Private, flexible, portable learning device. ● Providing instructional materials that students can access anywhere, or in specific contexts (like instructor commentary for a museum trip). ● Capture images, video, sound, GPS coordinates, and ideas (as notes). ● Being able to stay in touch with classmates anywhere or during specific field activities.
How is it used?	<ul style="list-style-type: none"> ● Enables mobility and mobile variation related to instructional approaches, disciplines, learning goals and technological tools. ● Can be used as platforms for creating projects (e.g., interviews on a smartphone recorder). ● Mobile phones have several applications that can be useful in the teaching and learning process, including general software, such as Word, Excel, and PowerPoint, language learning, and mathematical problem-solving software. ● Students' complete homework assignments on the device.
What are potential challenges?	<ul style="list-style-type: none"> ● Skepticism among faculty that is produced when instructors lack the level of skill that is needed to integrate technology into their teaching. ● Developing robust technology infrastructure to support mobile learning. ● Ensuring accessibility for all students. ● Keeping up with the increasing technological advancement.

RESEARCH PERSPECTIVE ON TOOL, APPROACH, TECHNOLOGY

Smartphone adoption is not yet 100% among students, but it is quite high and growing. [Over 90%](#) of 18–29-year-olds in the US have a smartphone, and among urban college student’s smartphone ownership is universal. In a 2018 survey by Learning House and Aslanian Market Research of 1,500 exclusively online students, 80 percent said they complete some, if not all, of their course work using a mobile device. More than half of respondents said they access course readings and communicate with professors from their smartphones, and more than 40 percent said they conduct research for reports and access the learning management system on mobile devices. Faculty at recent conferences report that some students expect course materials to be accessible to them on their mobile devices just as they would be on a laptop.

Although many students embrace using smartphones in higher education, some faculty members have a different outlook. Educause [survey on face-to-face experiences](#) in a 2017 study revealed, 70 percent of nearly 44,000 students reported that instructors banned or discouraged the use of smartphones in the classroom. A major reason for not using the smartphone for mobile learning, faculty members believe incorporating technologies could make them better instructors if they knew how to better integrate them into their teaching.

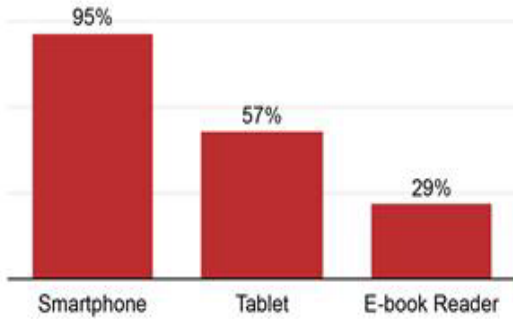


Figure 1. Device ownership

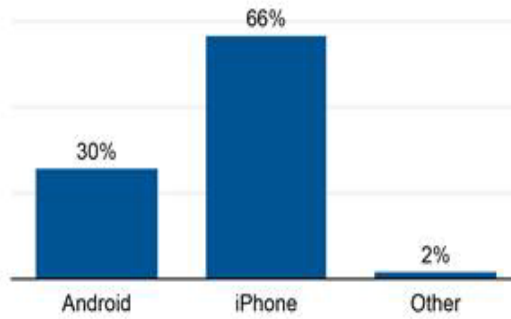


Figure 2. Smartphone ownership

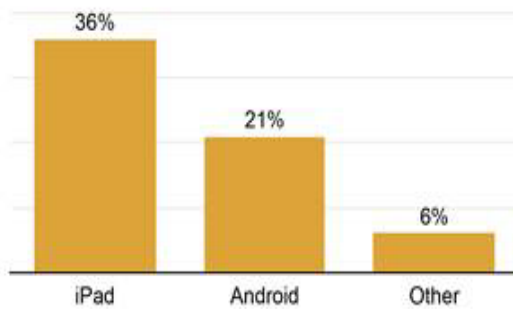


Figure 3. Tablet ownership

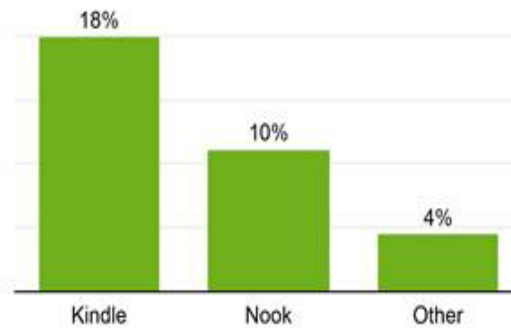


Figure 4. E-book reader ownership

Graph: Educause. Students' Mobile Learning Practices in Higher Education: A Multi-Year Study.

BEST PRACTICES AND TOOLS: NOW & IN THE FUTURE

Collected data indicated that more than 95 percent of respondents ($N = 1,181$) owned a smartphone device (see figure 1). As figure 2 shows, most students owned either an iPhone (66 percent) or an Android (30 percent). As figures 1–4 show, tablet and e-book reader ownership are low compared to smartphone devices. Overall, 57 percent of students own tablets; of those, 36 percent own an iPad and 21 percent own an Android tablet (see figure 3).

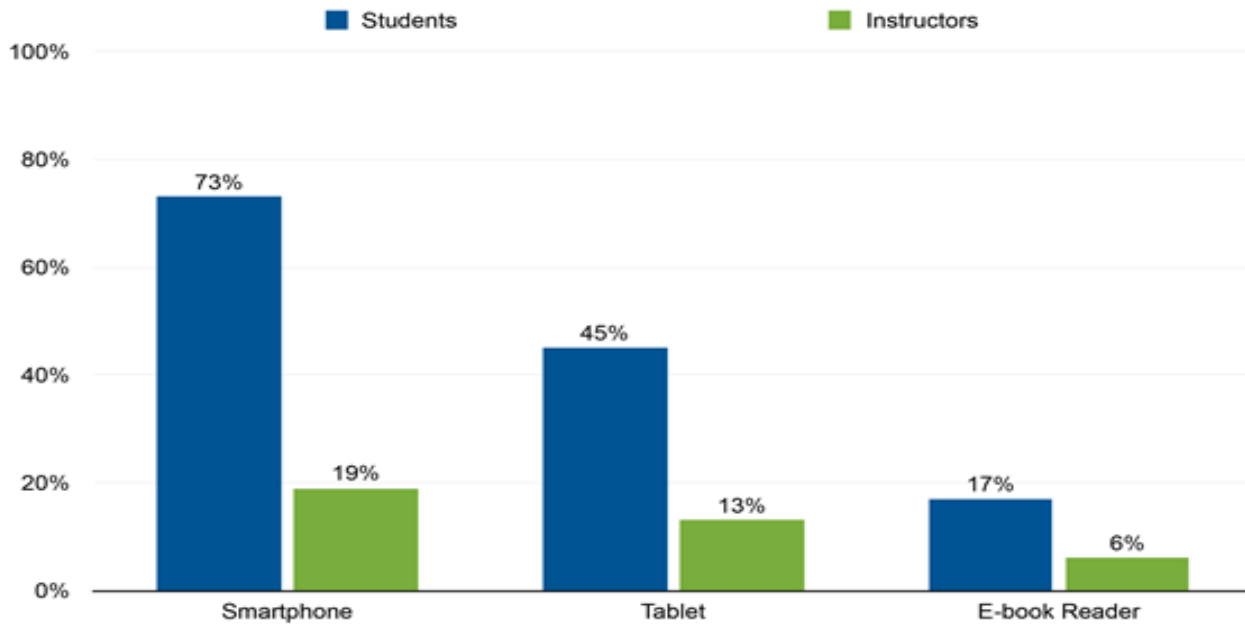


Figure 6. Student usage to instructor requirement of devices for assignments (N = 1,181)

Graph: Educause. Students' Mobile Learning Practices in Higher Education: A Multi-Year Study.

For learning on their own, students reported using smartphones (73 percent) more than tablets (45 percent) and e-books (17 percent). Furthermore, 66 percent of students ($n = 781$) reported using a mobile app for learning at least once each week. However, according to the participants, instructors rarely required mobile device use to complete assignments; respondents said only 19 percent of instructors required smartphone use, 13 percent required tablets, and 6 percent required book readers.

As research has shown, the trend for using smartphone technology for mobile learning is continuing to increase in higher education. In fact, according to research, the number of mobile devices continues to increase, more faculty are using videoconferencing to communicate for teaching and research purposes, and cloud storage is becoming more commonplace as faculty want to access their work across their various devices from multiple locations. For example, the University of Alabama has seen the number of mobile devices used on campus double over the last six years, from 30,000 clients to almost 60,000. It is safe to estimate that mobile device usage will continue to grow, further increasing demand on IT infrastructure.

RECOMMENDATIONS:

Skepticism among faculty that is produced when instructors lack the level of skill that is needed to integrate technology into their teaching:

- Providing learning communities that offer instructors opportunities for both technology training (IT units) and examples of good practices of teaching with technology (especially when they come from peers).
- Adopting professional development models for technology and pedagogy, and can facilitate larger institutional changes.

- Incorporating mentoring by experts; respond to various levels of skill, knowledge, and expertise; evaluate outcomes.

Developing robust technology infrastructure to support mobile learning:

- Updating infrastructure so that it will be able to support bandwidth requirements
- Negotiating with vendors to purchase campus-wide licenses, and installing redundant high-speed connections for high-volume users are all ways that institutions can provide various technology services while planning for future development.
- Communicating the needs to the financial and administrative heads to portray a realistic view of required monetary support for the upcoming years.

Ensuring accessibility for all students:

- Students can be asked to pair up for field activities.
- Alternative activities or instructions can be provided for students who do not have or do not want to use their smartphones.
- Academic units that rely heavily on mobile learning can develop a system for lending out devices to students.

Keeping up with the increasing technological advancements:

- Innovative technology is released throughout the year.
- What is new and exciting today may not always be around in three to five years.
- It is critical for technology leaders to not only keep track of innovative technologies, but to also evaluate what will be around and supportable in the future.
- It is also good to evaluate what is likely to be used by the faculty in the future.

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