Academics often cringe at the thought of smart phones, iPads, iPods, or any of the various new tablet devices in the classroom. They see them as distractions, certain that students are using them to read Facebook postings or text their friends during class. “Some educators have responded by banning this new technology from the learning space, demanding that students turn off their smart phones and keep their tablet computers stowed in their bags” (Parry, 2011, p. 16).

I love my new iPad2 — it is effortless to use and it weighs next to nothing. But it has made me wonder about the impact mobile devices will have on learning. The recent 2011 Horizon Report projects mobile learning’s time to adoption as one year or less with two convincing statements: “By 2015, 80% of people accessing the Internet will be doing so from mobile devices” and “Internet-capable mobile devices will outnumber computers within the next year” (Johnson, Smith, Willis, Levine, & Haywood, 2011, p. 12).

As educators, we need to learn how to embrace mobile devices both inside and outside our classrooms. As Parry (2011, p. 16) suggests, “We are called on as teachers to teach them [students] how to use these technologies effectively, to ensure that they end up on the right side of the digital divide: the side that knows how to use social media to band together.” Parry believes that mobile web literacy is as important as basic literacy and a necessary skill for future employment. Yarmey’s (2011) research also supports the idea of promoting information literacy in a mobile environment.

According to Schubert, president of Abilene Christian University and a pioneer in this area, “Mobile-learning strategies can reconnect students to their peers, challenge them with real-world data, and involve them in real-world conversations — all providing the relevance that students need for academic, social, and professional success” (2011, p. 8). To provide evidence for his mobile initiative, Schubert cited a press release about the 2009 National Survey of Student Engagement, which found college students “whose classes used course management technologies…or interactive technologies…scored higher on NSSE benchmarks, participated more in deep approaches to learning, and reported higher academic and personal gains during college” (NSSE, 2009). He also cited research conducted by Carini, Kuh, and Klein (2006, p. 10), which demonstrated that “student engagement is linked positively to desirable learning outcomes such as critical thinking and grades.”

As we have all read from educational research and best practices, learning needs to be active, engaging, make connections to prior knowledge, and provide authentic, real-world learning experiences. Rodrigo (2011) states that “the promise of mobile learning is the ability to engage students with creative and/or sophisticated content learning activities on their multimedia production devices. To achieve the promise of mobile learning, we have to stop thinking about these powerful mobile multimedia devices as only consumption devices and get students using them as production devices.” So, it is time to put an end to death by PowerPoint and begin to engage our students, leveraging rather than banning these mobile devices.

Creative Ideas for Engaging Students By using mobile learning, the educator can promote three different types of literacy (Parry, 2011). The first is the most obvious, understanding information access: It is fairly easy to call upon students to access information from their mobile devices to answer questions or solve problems in class. For example, you might present a case study of a patient and ask different groups of students to find information, such as, what diagnoses are associated with the patient’s signs and symptoms, what nursing interventions are appropriate as defined by their text or the evidence (research or clinical guidelines), or what patient educational materials are available online. Think about having your students use polling tools that are readily available on mobile devices to answer questions in class and then search for support for their choice of answers.

A second example is what Parry calls understanding the new sense of space. Although there is controversy regarding how our cell phones keep track of our whereabouts, there are a lot of ways we can use geotagging for learning activities outside the classroom. Many applications available for your mobile devices layer information regarding the physical world. Imagine being able to participate in what Gagnon (2010) refers to as situated, contextual, just-in-time, participatory, and personalized learning. Gagnon describes several ways to engage students in learning experiences outside the classroom and provides a link to the Ari website (http://arisgames.org), a tool that allows users to create games or interactive stories based on GPS locations.

Parry’s (2011) last example focuses on understanding hyperconnectivity. Here, Twitter is used in the classroom as a collaborative, note-taking exercise. This is not meant to distract students but to encourage them to share ideas, notes, and questions that arise within the class and hopefully extend the conversation outside the classroom space.

Two good examples of understanding hyperconnectivity come from Purdue University. The first is an application (app) called Mixable, billed as a social learning environment centered on the classroom. Available on the web and on mobile devices, this app allows student to “build and share their personal learning environments using the social tools they already know — Facebook, Twitter, and Dropbox” (Bown, 2011). The app allows students to do status updates, microblogging, document sharing, and bookmarking (see www.itap.purdue.edu/studio/mixable/).

The second example is HotSeat, a collaborative discussion for inside and outside the classroom. Students can download this application on their mobile devices and provide real-time feedback in class, posting as a collaborative, note-taking exercise. This is not meant to distract students but to encourage them to share ideas, notes, and questions that arise within the class and hopefully extend the conversation outside the classroom space.
questions, voting on the questions, sharing ideas, and providing feedback
to the instructor (www.itap.purdue.edu/studio/hotseat/).

An example of a mobile learning environment by Linkov et al. (2011)
describes the emergence of a global health network. “Supercourse
Mobile Network now encompasses 50,000 global health experts sup-
porting the content offered and more than 300 individuals interested in
mobile technology and health.” It is interesting to see how terms and
ideas emerge, for example, app-ideology — the application of apps on
mobile devices to epidemiology and global health issues” (Linkov et al.).
For more information, visit www.pitt.edu/~super1/globalhealth/
mobileGHScourse.htm.

Based on Ryan (2007) and Educause’s 7 Things You Need to Know, here
are some reasons why mobile learning is significant:

• Natural fit for distributed learning and fieldwork (students can learn
just in time and within situated learning experiences — think clinical
practice, simulation labs, community health experiences).
• Natural fit for students that includes ease of use (students know
how to work these devices).
• No need to call technology services (IT) to get the electronic class-
room to work. If there is wireless connectivity, students can just use
their devices.
• Promotes active learning, student engagement, and collaboration.

• Connects students with each other and with instructor in large classes.
• Supports lifelong learning as it is integrated within a tool used for
daily living.
• Provides access to experts, information, and knowledge at the point
of learning (Ryan, 2007).
• Builds a community of practice that extends learning beyond the
classroom or the online course management system (Ryan, 2007).
• Here are some of the downsides of mobile learning:
  • Hardware platforms vary in terms of screen size and functionalities.
  • There is no development standard for creating new applications.
  • Cost of data plans on mobile devices.
  • Wireless infrastructure needs to be in place for learning spaces.
  • Re-purposing current learning materials to fit mobile devices can be
    a challenge for IT, instructional designers, and, of course, faculty.
  • These devices can provide frequent interruptions for a student
despite their engagement in the class.
  • Faculty are not as familiar with the tools.

From all indications in the literature, there is no turning back.
Students will no longer be lugging large backpacks filled with textbooks
and laptops to class. They will be using e-books and bringing their mobile
devices, their iPods, smart phones, tablets, or iPads. We, as educators,
will need to learn alongside our students how to leverage these new
learning tools. As Parry (2011, p. 18) so aptly states, “The key piece is
recognizing that the mobile computing power in our pockets radically changes not merely our classrooms
but, more important, the spaces that students inhabit
and the conversations they have outside of our teach-
ing.”

My best advice is to survey your students. What do they have in terms of mobile devices? How many of
them are Internet capable? Ask them if they are willing
to experiment with you. Find out if your classrooms
have wi-fi access. Start small by asking students to
access information while in class (team students who
do not have mobile devices with those who do). Begin
to engage them in the learning process and help them
understand how these tools can connect them to
knowledge and resources. Evaluate the experience and
examine if student engagement increases. And, most of
all, instead of competing with the mobile devices, gar-
ner that student’s attention and turn the tool from a
distraction into a learning tool.

Check out Educause’s 129 resources for mobile learn-
ing at www.educause.edu/Resources/Browse/Mobile
%20Learning/17505. Read Educause publications, watch
some videos, listen to some podcasts, and visit the many
links offered on the site. For example, watch a talk by two
faculty about classroom engagement in the age of cell
phones and social media at www.educause.edu/E2010/
Program/SESS052.

Speak with your colleagues and see what they are
doing in class. And, of course, write about your success stories. Send them to me in an email (Diane.Skiba@ucdenver.edu) and share them at conferences, such as the NLN Technology Conference scheduled for November 4-6 at Duke University, where I will be presenting.

A final piece of sage advice comes from Schubert: “Following a path of innovation requires strong leadership that is willing to forge up the hill even when the summit is not visible — and to be fully prepared for the likelihood that once the fog dissipates, it may be clear that the hill just taken was the wrong one. Instead of defining success by a preconceived destination, we should see real success in innovation as the ability to create value from insights discovered along the journey” (2011, p. 9).

References


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