

# Chapter 2

## Mobile First E-Learning

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### ABSTRACT

*The rapid rise in mobile computing—primarily smartphones and tablets—has led software and interface designers to adopt a “mobile first” strategy, where they develop applications with mobile users in mind as the primary audience. More than just bringing desktop computing to smaller devices, this turn has opened up qualitatively different computing experience, refocusing interaction design on high quality user experiences. This chapter explores the ways that mobile first can help instructional designers realize a more contextual learning experience embedded in the world. We look at the primary approaches of mobile first design and then explore some cases of mobile design for learning that foster authentic and deep learning.*

### INTRODUCTION

The explosive growth of mobile computing in recent years has forced digital designers to rethink their approaches to interaction design, to fully account for the growth of mobile computing. According to a study conducted by the Pew Research Center, as of 2013, smartphones are owned by almost two-thirds (61 percent) of the adult population in the United States (Smith, 2013). This percentage does not include the ownership of other mobile devices such as tablets. Moreover, this growth has not been restricted solely in terms of the quantity of people physically possessing mobile devices, but also encompasses rapid growth in the computing capabilities of mobile devices. Luke Wroblewski (2011) introduces the practice of *Mobile First*, in his book about mobile design, with the following epigraph:

*designing for mobile first not only prepares you for the explosive growth and new opportunities on the mobile internet, it forces you to focus and enables you to innovate in ways you previously couldn't. (p. 5)*

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Wroblewski argues for a “mobile first” approach to design, where designers target mobile users as the primary users of a system, expanding from there to more traditional, desktop computing. We take the challenge of “mobile first” as the point of departure for this paper, as an invitation to reexamine our practices as instructional designers and educational technologists: what would mobile first *e-learning* look like?

Mobile learning has, so far, been regarded as a weak substitute for desktop learning, mostly explored in the margins of education. It is often seen as an approach for the “developing world,” as auxiliary support for traditional learning (e.g. podcasts to support lectures), as a method for educational niches (e.g. museum education), or as outreach to adult learners. Mobile learning makes sense in all of these cases, however relegating mobile to the boundaries of current educational practices fails to recognize mobile technology’s potential to reshape our core educational institutions: K-12 schools, colleges and universities, and work-based training. One of the biggest opportunities of mobile first is that it blurs the boundary between formal and informal learning. Jonathan Traxler (2009) positions mobile learning as a subset of informal learning, considering how, “much mobile learning [is] at odds with formal learning (with its cohorts, courses, semesters, assessments, and campuses) and with its monitoring and evaluation regimes” (p. 10). Without disagreeing with Traxler in that mobile learning is typically considered part of informal learning, the time has come to seriously consider the proposition that mobile learning will be, and *should be*, the dominant mode of *formal learning* for most people, most of the time.

As Traxler notes, formal learning is characterized by groups of learners, curricula, courses, assessments, and physical campuses. More abstractly we recognize that an underlying characteristic of formal learning stems from its intentionality, especially through dedicating private or public resources to support learning in combination with the explicit design of learning experiences. In our definition, resource allocation and design (planning) distinguish formal education from informal learning. By explicitly designing and fostering mobile learning experiences, we introduce aspects of informal learning experience into formal learning.

Looking at the current e-learning landscape, we quickly recognize that formal/informal learning is not (and never has been) a binary distinction. On the formal side, we have learning management systems, like Blackboard or Moodle, engineered to support classes organized in weekly blocks that correspond with classroom lectures on a college campus. We, slightly, loosen our collars when we look at popular massive open online courses (MOOCs) or Khan Academy: learning experiences designed around lectures, outcomes, and problem sets. In a less formal, middle ground we might find TED Talks, where the organization has a specific learning goal (spreading “ideas that matter”) and the speakers deliver clear, targeted lectures. As we move into informal e-learning territory, we might come across the online role playing game World of Warcraft, where players, as they seek glory and adventure for themselves and their guild might also learn principles of economics and market economies, improve their writing and rhetorical skills, and develop a tacit understanding of organizational psychology. In these examples, among other things, we see a progression from artifacts that are highly designed to support learning, to ones where design for learning has not been a concern.

Mobile technologies offer an opportunity to re-channel some of our educational resources to allow informal learning to benefit from elements that have traditionally rested in the domain of formal learning. Kurt Squire (2010) notes that digital technologies reshape learning by offering, “two crucial disruptions: instantaneous access to information, and persistent access to distributed networks of expertise” (p. 2567). We add a third crucial disruption wrought by mobile computing: handheld tools for

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