

CHAPTER 16

OWI ON THE GO

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A growing number of students own smartphones and tablets, some of whom use those devices as their primary Internet connection. To account for this trend, OWI administrators and instructors need to support students accessing and completing OWCs through their mobile devices. OWI WPAs should research the students of their own programs and dialogue with IT administrators to learn how to support students on their mobile devices. OWI programs need to develop an ongoing professional development community that helps faculty and staff explore and understand the various devices students bring to their learning endeavors. OWC instructors need to design instructional content for delivery on the typically smaller screens of mobile devices. To this end, they might use the need for supporting a myriad of hardware and software as well as the affordances of mobile connectivity as an exigency for designing both low-stakes and major course assignments using or about mobile devices.

Keywords: digital divide, mobile, multimodal, professional development, smartphone, support, tablet

In September 2013, EDUCAUSE’s annual Study of Undergraduate Students and Information Technology stated that “ownership of smartphones and tablets jumped the most (among all devices from 2012-13)” (Dahlstrom, Walker, & Dziuban, 2013, p. 24) and that students’ “ownership of laptops and smartphones exceeds that of the general adult population” (p. 25). In short, undergraduate students in higher education are already mobile; therefore, OWI Principle 1, with its call for universal inclusivity and accessibility (pp. 7-11), requires that OWI WPAs and instructors start going mobile as well. Knowing who owns smartphones is not enough; OWI Principle 2 reminds us that OWI should focus on writing, not teaching the technology unless the rhetoric of technology is part of the course outcomes (pp. 7-11; also see Chapter 14). Indeed, OWI WPAs and faculty need to understand how smartphone owners use the devices as well. A recent Pew Internet-focused study has noted a “mobile difference”:

Once someone has a wireless device, she becomes much more

active in how she uses the Internet—not just with wireless connectivity, but also with wired devices. The same holds true for the impact of wireless connections and people’s interest in using the Internet to connect with others. (Zichuhr & Smith, 2012, p. 14)

WPAs and OWI teachers deserve credit for all the hard work they already do; however, the shift to smaller, Internet-connecting mobile devices will need both groups to remain committed to *writing* instruction (OWI Principle 2) while *adapting* to and *adopting* strategies for the growing number of students using mobile devices (OWI Principle 1). This chapter uses the discussion of mobile devices—their prevalence in higher education, the ways in which they complicate OWI, and suggestions for ways to incorporate mobile learning into OWI—to continue complicating the tension between OWI Principle 1 and OWI Principle 2, as discussed in Chapters 1, 4, 8, 9, 10, and 14 (pp. 7-11).

ON THE GO: MOBILE DEVICES IN HIGHER EDUCATION

In *The Mobile Academy*, Clark N. Quinn (2012) discussed four capabilities of mobile devices to consider when thinking about teaching and learning in online settings: storing and accessing *content*, *capturing* materials, *computing* and manipulating digital data, and *communicating* (pp. 17-18). These affordances emphasize the core communicative—dare I say, rhetorical—nature of mobile devices. As smartphones and tablets become increasingly popular for day-to-day business and personal communications through the Internet, why wouldn’t composition instructors be teaching mobile communication strategies in writing courses generally and accounting for mobile learning strategies in OWCs particularly?

This call is not new; in 2009, Amy Kimme Hea, the editor of *Going Wireless*, claimed that composition teachers and researchers needed to pay attention to mobile devices and their quickly evolving nature. However, as the iPhone had just been released in 2007, most of the chapters within Hea’s collection discussed the impact of laptops, as well as cellphones and/or PDAs occasionally. Although many of the critical arguments found in *Going Wireless* are relevant to smartphones, smartphones are impacting our culture in slightly different ways that make investigating them separately or differently from how we examine laptops, especially in terms of OWI, a required endeavor.

The New Media Consortium’s (NMC) and the National Learning Infrastructure Initiative’s (a group within EDUCAUSE) second *Horizon Report* (2005) projected “ubiquitous wireless” as a technology within the one year or less time-

to-adoption within higher education. Although they were discussing laptops, handhelds, and cell phones (p. 9)—not explicitly discussing smartphone or tablet usage—it is quickly becoming obvious that the NMC and EDUCAUSE have had a clear view of the importance of mobile devices in higher education long before many OWI-focused WPAs and teachers; they particularly considered devices ranging from “larger” laptops to more personalized and smaller cell phones, tablets, and smartphones.

Thinking about mobile devices in higher education is no longer about looking forward to change; instead, it is about reconciling with technological changes that have been occurring over the past decade as Internet connection devices have become smaller, more personalized, and more prevalent—currently stabilizing in the shape of the smartphone (a cell phone with its own operating system and Internet connectivity through both cellular and Wi-Fi networks). This reconciliation with mobile technologies is at the heart of OWI Principle 1, making sure OWI is designed and delivered in a way to include participants accessing OWCs with dominant technologies—which now includes mobile devices (pp. 7-11).

Aaron Smith’s (2012a) March, 2012 Pew Internet and American Life report announced a tipping point: Suddenly, there were more smartphone than regular cell phone users; 46% of Americans owned smartphones with 41% owning other phones (p. 2). Since then, the numbers have only increased. The Nielsen Company (2013b) announced in March, 2013 that 59% of Americans owned smartphones (p. 17). Ownership numbers are higher among traditional college-aged people: 66% ownership 18-29 year olds (Smith, 2012a, p. 5). Additionally, income and educational attainment are not as significant with this younger-aged group; in other words, individuals under 30 years of age are more likely to own smartphones whether or not they make more than \$30,000 and/or have some college experience (p. 5). Although these numbers are outdated even as I write this chapter (e.g., as soon as September 2012, six months after Smith’s report above, Lee Rainie’s (2012a) September, 2012 report from the Pew Foundation emphasized both youth and higher income brackets as markers of smartphone ownership), and definitely by the time this book is published, the data still demonstrate important trends for faculty and administrators of OWI programs.

OWI Principle 1 specifically addressed the digital divide with concerns about “technological equality” and the financial accessibility of technologies required by an OWC. Ownership statistics about smartphones flip some common assumptions about technological equality and accessibility. Age and education are not the only markers of smartphone ownership. In March, 2013, The Nielsen Company (2013b) announced the following smartphone ownership patterns

by ethnicity: White 55%, African American 68%, Hispanic 68%, and Asian 74% (p. 17). One of the Pew studies (Zickuhr & Smith, 2012) more eloquently stated:

Groups that have traditionally been on the other side of the digital divide in basic Internet access are using wireless connections to go online. Among smartphone owners, young adults, minorities, those with no college experience, and those with lower household income levels are more likely than other groups to say that their phone is their main source of Internet access. (p. 2)

A few months later in June, A. Smith (2012b) claimed that “55% cell phone users use their phone to go online” and 17% “go online *mostly* on cell phone” (p. 2). By March 2013, a Pew report claimed that 74% of teens ages 12-17 access the Internet on mobile devices “at least occasionally” and “one in four teens are ‘cell-mostly’ Internet users” (Zickuhr, Rainie, Purcell, Madden & Brenner, 2013, p. 2). In October 2012, Rainie’s (2012c) report from Pew discussed Pew’s need to change how they ask about and define Internet usage. Although they added a question that “counts” mobile Internet usage, it did not increase the number of American Internet users in a statistically significant manner (p. 2). However, Rainie acknowledged that there are “demographic differences when mobile connectivity is added” (p. 2).

Studies of undergraduate smartphone ownership generally parallel national studies of technology ownership. During their 2008 annual national study of undergraduate students and information technology, EDUCAUSE stopped asking about basic cell phone ownership (Smith, Salaway & Caruso, 2009, p. 87). As of 2012, 62% of undergraduate students owned smartphones and “nearly twice as many in 2012 (67%) than in 2011 (37%) reported using their smartphone for academic purposes” (Dahlstrom, 2012, p. 14). In 2012, students also reported a growth in tablet ownership and a leveling off of e-reader ownership (p. 15) with many using the devices for academic work—67% and 47% respectively (p. 14). According to Eden Dahlstrom and Stephen diFilipo (2013), in 2012, students brought on average at least two Internet-capable devices to campuses; they projected that by 2014, students would be bringing more than three devices (p. 10).

Although studies from Pew and Nielsen may reveal data that can overturn how most faculty understand the socio-economic digital divide, EDUCAUSE’s data remind scholars that a digital divide still exists. In 2011, “students at associate’s colleges and other two-year programs [were] more likely to own ‘stationary’ technologies, such as desktop computers” (Dobbin, Dahlstrom, Arroway, &

Sheehan, 2011, p. 9). The 2012 report specifically discussed smartphone ownership:

There are some significant differences in the demographics or institution type of undergraduate students who own smartphones but the field is equal for age and gender. Students who said they use their smartphones for academics, however, tended to be non-white ($p < 0.0001$), were not freshman/first-year or sophomore/second-year students ($p < 0.0001$) and were presently attending four-year institutions as opposed to an AA institution ($p < 0.0001$). (Dahlstrom, 2012, p. 15)

Whereas all the data demonstrate an increased trend of smartphone ownership across all demographics, knowing specific populations within specific contexts obviously is important.

Although student ownership of smartphones and other Internet capable mobile devices is up, Gartner's 2012 Hype Cycle¹ report for Education (Lowendahl, 2012) put both "mobile-learning" and "mobile-learning smartphones" in the "sliding into the trough of disillusionment" portion of the chart (i.e., as people have spent more time with the technology, they now have overcome the "peak of inflated expectations" and have lower expectations about what, how, and why the technology will work successfully). Based on almost ten years of predictions in The New Media Consortium's *Horizon Reports* (2005-2013), faculty in higher education should not be surprised with Gartner's placement of mobile-learning—small screens and tiny keyboards are not surprisingly challenging tools for writing lengthy papers, for example. However, just because mobile-learning is not new and people have adjusted their expectations does not mean we should be ignoring mobile technologies when discussing online learning. The statistics from Pew, Nielsen, and EDUCAUSE above demonstrate that a majority of our students have smartphones and a growing number own e-readers and tablets as well. As mobile-learning moves towards Gartner's "slope of enlightenment" and the "plateau of productivity," now is the perfect time to critically strategize mobile-learning in relation to OWI.

Both Pew studies as well as reports from The Nielsen Company emphasized the rise of the "connected viewer" (Smith & Boyles, 2012) who moves between screens "watching across different platforms including both mobile and tablet devices" (The Nielsen Company, 2013b). These are the same type of habits scholars already have tracked with students doing academic work (e.g., Dodd & Antonenko, 2012; Ihanainen & Moravec, 2011; Laffey, Amelung, & Goggins, 2009). However, whereas much of the scholarship about teaching and learning implies a distracted student, especially by social media (e.g., Fewkes & McCabe,

2012), A. Smith and Jan Lauren Boyles (2012) discussed how television viewers were checking data or websites introduced on television, as well as discussing and see what others had to say about a particular program (p. 2)—these evaluative processes and informed communications are some of the many behaviors we ask of “information literate” students (Association of College and Research Libraries, 2000). Kathryn Zickuhr and A. Smith’s Pew study (2012) emphasized how Black, non-Hispanic, and Hispanic groups are more likely to use various functionalities of their smartphones like accessing the Internet; taking, sending, and receiving photos; playing music, games, and videos; as well as doing online “business” like social networking, banking, or video calling/chatting (p. 21). Rainie’s (2012b) Pew report also discussed similar differences across race/ethnicity; however, the gap was quickly closing even then. Again, these mobile communicative activities speak to both OWI Principle 1 (accessibility) and OWI Principle 2 (focus on writing) and can be included as part of the content covered in OWI courses (pp. 7-11).

EDUCAUSE’s annual reports of undergraduate and information technology also documented how and why students use their devices. As early as 2009, over 50% of the owners of Internet-capable handheld devices were checking information, e-mailing, using social networking sites, and instant messaging (Smith et al., 2009, p. 95). Over 20% of the undergraduates polled were also conducting personal business, downloading/streaming music, and downloading/watching videos (p. 95). By 2010, using maps via satellite had jumped to over 50%, and those activities that had been at 20% usage increased to over 30% (Smith & Caruso, 2010, p. 60). In 2010, students rated the following mobile technologies as “extremely valuable” for academic success: laptop computer at 81%, netbook at 46%, smartphone at 33%, e-reader at 33%, mobile/cell phone at 32%, tablet (not iPad) at 26%, and iPad at 24% (p. 16).

When the CCCC OWI Committee conducted their surveys about fully online and hybrid/blended writing instruction (CCCC OWI Committee, 2011a & 2011b, respectively), they did not list mobile technologies as an option in their question about “which virtual tools and online teaching strategies” instructors use; however, the survey was conducted in 2010, only two years after EDUCAUSE stopped asking about cell phone ownership. Although the surveys shortsightedly did not provide the option, one individual wrote in “mobile blogging” while many short answers to open-ended questions discussed using phone calls and conferences as a strategy.

In short, mobile devices—especially handheld, personalized devices like smartphones and tablets—are here to stay, and they are used for educational purposes. With their general functionalities that emphasize various literate practices (e.g., reading, writing, image and video viewing), as well as the growing

number of individuals that use mobile devices as their primary access to the Internet, WPAs and OWI teachers should be planning for mobile-learning now.

READY, SET, GO: MOBILE DEVICES AND OWI

As indicated, the basis for this chapter is OWI Principle 1, which stated, “Online writing instruction should be universally inclusive and accessible” (p. 7). Specifically, Effective Practice 1.6, an example strategy for providing that access and inclusivity, reminded instructors that students *may* use mobile devices to access OWCs; however, the statistics above demonstrate that students *may* be doing more than just accessing the course materials. While a growing number of individuals use their mobile devices as their primary means of accessing the Internet, instructors need to be prepared for students who both may want, even need, to access and actively participate in the class from their mobile device. And OWI instructors are not alone because the institution and any student support service (i.e., IT, LMS, OWL, advising, and the like) also should be prepared to support students accessing their online resources and services through mobile devices (see OWI Principle 13, pp. 26-28; and Chapters 5 & 8). In other words, the digital divide works both ways; educators need to support the “haves” as well as the “have nots.”

There are a variety of ways that student uses of mobile devices impact the understanding and interpretations of the different OWI principles. Although OWC instructors should focus on writing, not the technologies, as explained in OWI Principle 2 (p. 11), the reality is many instructors still need to support their student’s technological interface with the course, which is primary to putting access first, as advocated in OWI Principle 1 (pp. 7-11). For example, many experienced OWI teachers probably have scripts of texts reminding students that the current version of the LMS works better in a particular browser. With the rise of mobile use, instructors—ideally through their institutions—will need to make students aware of whether or not their institution’s LMS has a mobile application as well as on which mobile operating systems that application runs. Studies have shown that students greatly prefer accessing their course materials from a native mobile app versus the mobile Web browser (Bowen & Pistilli, 2012, p. 7). Many companies first develop their applications for the iOS, Apple’s mobile operating system, since it does not run Flash; they leave Android, and now Windows, mobile users working through the mobile device’s regular Web browser. Indeed, just because the LMS has a mobile application does not mean that the application includes all of the functionality required to complete an OWC course. Many first attempts at LMS mobile applications result in functionality that only allows the students to access and consume course material,

as opposed to producing and uploading their writing. Many institutions have labeled “facilitating anytime, anywhere access to course materials for students [as] a high or essential priority” (Dahlstrom & diFilipo, 2013, p. 33); however, that does not necessarily mean students would be able to use the various interactive functionalities like posting and responding in discussion boards and/or uploading assignments. Verifying an LMS’s mobile app does not take into consideration whether the app itself is accessible, in the more traditional sense of the term, to students with different auditory or visibility abilities. Just as with computers, there is hardware and software that makes various applications more accessible in mobile environment; does the OWI LMS and course materials interface with those apps?

Even if the LMS or other required course applications are available in a mobile environment, it does not necessarily mean that a student’s mobile device is prepared to handle the application. Just as with software, different applications and media have different hardware, software, and Internet connectivity requirements. OWCs that require accessing videos or synchronous meetings might require large amounts of bandwidth. Students may not have access to a robust enough Wi-Fi network or they may not have purchased a large enough data plan from their mobile service provider. Writing programs will need to warn students in advance of the technological requirements, not only in terms of hardware and software, but also in terms of bandwidth and media/modalities.

Especially after trying to access their own courses from within a mobile environment, instructors may find that they need to be even more careful about course design and delivery for smaller screens. Not only should OWI instructors think about alphabetic text delivery, writing shorter, chunky paragraphs (OWI Effective Practice 3.3, pp. 12-13); they also might think about the ability, or lack thereof, for mobile device users to move back and forth between different sections of the course or assigned texts. Mobile devices might not allow students to move easily between tabbed browser pages or have two word processing documents open, one with notes and the other with drafted text. In looking to a future of more mobile devices and students accessing higher education through them, instructors and scholars would do well to start thinking about, experimenting with, and sharing strategies for composing in different environments, including the affordances and constraints found with mobile hardware and software.

Onsite and OWI teachers also need to consider that if a student’s primary computer is, in fact, her mobile device, she might be drafting entire papers with her thumbs. Similarly, although the word processing programs on mobile devices are becoming increasingly sophisticated, students still might struggle to handle more complex formatting requirements like hanging indents for bib-

liographic citations. Whereas OWI teachers traditionally have not been as concerned with students finding proctored computer labs to take high stakes tests, faculty need to help students realize that final formatting of papers likely needs to happen on a “regular” computer with a fully functional word processing program. As with the nontraditional students discussed in Chapter 10, the solution for these students may be the public library if they do not have alternate access at home or work and if the campus is geographically too distant. Although this may require more work on the student’s part and creative, patient support from the instructor (especially at a distance), it also represents an opportunity to emphasize core instructional principles about teaching and learning writing—in this case, emphasizing multiple drafts as a productive part of a writing process.

Although there may have been the illusion that instructors could somehow “know” all of the interface possibilities with their online courses while students were primarily using full-function computers (e.g., desktops or laptops), the various makes, models, and operating systems within the world of mobile devices definitely makes it impossible for any individual instructor to know how a student’s device will interface with the course material. The CCCC OWI Committee certainly is not asking such an impossibility of teachers. Although OWI Principles 2 and 10 emphasize that institutions should be the ones supporting student technology use (pp. 7, 21-23), respondents to the surveys about fully online and hybrid/blended OWI emphatically agreed about the need for “providing reasonable support to students for succeeding in the online environment” (CCCC OWI Committee, 2011a, 2011b). To provide this type of support to the growing number of students using mobile devices, or at least having faculty reasonably aware of some of the major issues that might occur when their OWC interacts with popular mobile devices and operating systems, WPAs will need to advocate for institutional support of students, faculty, and programs per OWI Principle 12 (pp. 24-26).

One final problem—for now—regarding the issue of OWI in mobile environments is the WPAs’ and OWI teachers’ general lack of awareness of mobile computing with respect to OWCs. Since many of these individuals cannot imagine taking an online course and/or writing an entire paper on a mobile device, especially a small-screened device, they disavow the fact that students actually are doing a lot of work, sometimes a majority of their work, on mobile devices. Even with evidence like that presented at the beginning of this chapter, many faculty and administrators cannot imagine that *their* students fit into this category. Hence, WPAs and their OWI faculty cannot begin to discuss what might constitute “reasonable” support for online learners using mobile devices if they are not aware of the students in their programs. Just as *A Position Statement of Principles and Example Effective Practices for OWI* concluded that folks in an

OWC should be committed to ongoing research (OWI Principle 15, pp. 31-32), this chapter now ends the discussion of potential problems and starts the discussion of solutions and recommendations, beginning with the suggestion that writing programs specifically research the types of hardware and software students are using in their OWCs—and, in many cases, may be using in their onsite courses as well.

AWAY WE GO: OWI AND MOBILE DEVICES

Organizations like Pew, Nielsen, and EDUCAUSE are regularly collecting and publishing data about mobile device ownership and usage patterns. These organizations, as well as higher education administrators, instructors—even this author—can get caught up in the positivistic rhetoric produced by business and industry. WPAs and instructors of OWCs should collect similar data so that they can talk more precisely about the mobile needs of their program, per the research suggestions of OWI Principle 15 (pp. 31-32). Writing programs (again, students use these devices in onsite courses, too) probably should collect more than just ownership and basic usage data; *access* is more than just having the hardware and software, but also entails knowing how to use it flexibly. Researchers can begin identifying students with whom they might conduct more robust, even longitudinal, studies and about how students learn and write in a mobile environments. Beyond researching and exploring the specific contextual needs of their program so that they are universally inclusive and accessible, administrators and instructors of OWCs should think about how to engage with pedagogical, professional development, and institutional support issues related to mobile learning.

GOOD TO GO: OWI AND MOBILE PEDAGOGY

Most of the pedagogical suggestions below attempt to balance the need to make OWI inclusive and accessible, as stated in OWI Principle 1 (pp. 7-11), while still staying focused on the instruction of writing, per OWI Principle 2, over teaching technology or attempting to become versatile in all of the technologies students may use (p. 11). In many cases, the pedagogical suggestions fall within OWI Principle 3 by taking unique features of mobile learning to design OWI instructional materials and activities (pp. 12-14).

Michael G. Moore and Greg Kearsley (1996) claimed that in distance learning there are different types of interaction: learner-to-content, learner-to-instructor, and learner-to-learner. When instructors of OWCs acknowledge that a growing number of students will be accessing and participating in the course via a mobile device with a smaller screen and probably slower connection speeds

(Cheon, Lee, Crooks, & Song, 2012, p. 1060), they need to plan these interactions accordingly. If the majority of the interactions are asynchronous, speed is not as high of a concern; however, in a culture that privileges speed and efficiency, having a “slow” course reflects poorly upon both the instructor and the institution. To meet the needs of students accessing the course via mobile devices, instructors need to make sure course content is downloadable in bite-size chunks. To facilitate learner-to-instructor and learner-to-learner interaction, instructors should try to work with the methods and applications that are more streamlined on the students’ mobile devices; this workaround implies that instructors will survey students at the beginning of the semester to find out what hardware *and* software or applications they are using to access and participate in the course.

In other words, as students continue to use a growing variety of hardware and software options to access the online course, they will need help understanding and reflecting upon their individualized learning experience. Besides individuality, Eric Klopfer, Kurt Squire, and Henry Jenkins (2002) identified four more properties of mobile devices that can impact teaching and learning writing online: portability, social interactivity, context sensitivity, and connectivity. These characteristics describe certain affordances and constraints of designing OWCs with mobile learning in mind. Considering portability means that not only can online learning take place anywhere, instructors specifically can require that OWI take place in a multitude of locations; instructors can ask students to identify context-specific examples of different rhetorical acts and/or other communicative texts (e.g., advertisements on billboards, pamphlets in medical offices). Many mobile devices are geo-spatially aware; faculty might include reflections of analyzing (as well as producing) texts that account for specific geo-spatial coordinates or other information. For example, faculty might have students collaboratively construct maps with content that is tagged with specific location information. Mobile devices allow OWI teachers not only to design for distance learning but for location-specific composition as well. And, since the devices are connected, instructors can ask for students to interact asynchronously or synchronously from within different environments, especially using social media or document-sharing applications; while discussing mobile composition, Olin Bjork and John Pedro Schwartz (2009) reminded us that “*where* students write determines not only *what* they write but also what they write *with*” (p. 225). Now, more than ever, this thinking is apt.

Ultimately, the online writing instructor should be focusing on teaching writing, not teaching technology (OWI Principle 2, p. 11); however, as students use an increasingly diverse set of hardware and software to access and engage course materials, OWI instructors do need to account for technical support. Effective practices emphasize that institutional IT staff should help support stu-

dents' learning and using the required course technologies; however, OWI faculty might want to incorporate low-stakes learn-the-technology assignments where students safely can explore how they will interact in a specific course with their individual devices. These types of activities will help all students practice accessing course materials with their specific hardware, like smaller screened mobile devices, and/or software, like screen readers. And although students may appear to know how to work their mobile devices, they may only know how to send text messages and post Facebook updates. The 2012 EDUCAUSE undergraduate students and IT report explicitly claimed that "even though most students felt prepared to use technology upon entry, most also said they need or want more technology training or skills" (Dahlstrom, 2012, p. 22). Although it is not the explicit responsibility of OWI teachers to increase their students' techno-literacies, doing so can be considered within their purview as writing-as-rhetoric teachers (see Chapter 14, for example). On a practical level, historically, writing instructors have had to accept this task in terms of educating their students about specific communications technologies, especially concerning advanced formatting features in word processing programs, which is one reason that OWI teachers asked for a guideline such as OWI Principle 2 to begin with (p. 11). Providing low-stakes opportunities to understand better how a student's device interacts with the different course technologies and materials, and then repeating the activities (OWI Effective Practice 3.6, p. 13), can help to avoid major crises during later high-stakes assignments. It is helpful, therefore, to make sure students understand that testing technologies in advance is a techno-literacy skill with learning benefits for students and instructors alike. For example, should the mobile device fail to be usable for a particular assignment, the students who tested their technologies will know that they need to access a different device to complete the work. More importantly, testing technologies in advance is a techno-literacy administrators need to understand as well. The first day of class is too late for students to realize the computer they plan to use for their OWC will not suffice. Administrators need to construct a system that makes students aware of the technological requirements of OWCs *and* allows students to test their computers and mobile devices *prior* to enrolling in the OWC per OWI Principle 10 (pp. 21-23; see also Chapter 13).

Learn-the-technology assignments need not only be low-stakes or assigned to individual students; OWI teachers can design major assignments that ask all students to take responsibility for learning and supporting their own computing devices. Based on the course modality, OWI students already will be more aware about how they interface with different technologies—or, their teachers can endeavor to make them so. Minimally, faculty can adapt typical technical or professional writing "instructions" assignment for OWI learn-the-technology

assignments. Grouping students who own similar devices would allow them to share resources and support one another as well as to develop support communities that foster student success per OWI Principle 11 (pp. 23-24). This type of activity by no means excuses instructors and institutions from supporting students' technology issues (i.e., they can share resources located and developed by instructors and/or the institution); instead, it makes online technology support per OWI Principle 13 (pp. 26-28) a collaborative endeavor—the way it often is in business and industry.

Beyond merely being prepared for students using mobile devices in OWCs (OWI Principle 1, pp. 7-11), mobile devices offer certain affordances that positively support writing instruction (OWI Principle 2, p. 11). Mobile devices already are multimodal pocket notebooks that should be leveraged so that students can record images, sounds, video, and traditional alphabetic text while they are out and about in the world. Instructors can ask students to find and record examples of course concepts or to accumulate a digital pile of multimodal invention or research notes. Clay Spinuzzi (2009) stated that the “genie’s out of the bottle” and students already are using their mobile devices to record “news” in the real world; OWI should prompt students to use mobile devices to “record” and write the world as well.

As it is likely that many-to-most students in the OWC own mobile devices of some kind—despite their choice to use more traditional and potentially more manageable technologies for their classes—some assignments can ask the entire class to consider and use a mobile device. For example, mobile devices might be used to help emphasize different possible steps in any given writing process and/or different canon of rhetoric. Johndan Johnson-Eilola and Stuart A. Selber (2009) proposed the “3CT” framework to help students analyze and reflect production processes in terms of context, change, content, and tools. As indicated in Chapter 14, students and instructors can use the variety of production, publication, and consumption devices as a way to discuss the rhetorical appropriateness of a composition process and/or product. Discussing with students how final formatting might require a different environment, maybe even a different hardware and/or software application, helps to emphasize the distinction between drafting and global level revision with final formatting, editing, and delivery or publication. Asking students to write in different environments can help to “foster awareness of their social, cultural, and historical locations” (Bjork & Schwartz, 2009, p. 231).

Mobile devices are, at their core, communication environments where an increasing amount of “business,” both inside and outside of higher education, gets done. Having students compose and deliver mobile-friendly genres (i.e., emails, social media posts and responses, even digital images and videos with basic ed-

iting) from their devices in a critically sound and reflective manner promotes a variety of twenty-first century and multimedia literacies (National Council of Teachers of English, 2013). Students might even conduct research on how communication practices in their field, discipline, and/or future profession have been impacted by mobile devices. In other words, with mobile devices student might both *take* the OWI course as well as *complete* the OWI writing assignments.

Considering that many smartphone users access the Internet from their smartphones for information, especially just-in-time and location/activity specific (Dahlstrom, 2012; The Nielsen Company, 2013a; Rainie & Fox, 2012; Smith & Boyles, 2012), it makes sense to add a layer of discussions and activities around accessing, evaluating, and using electronic resources. The Pew study “How Teens Do Research in the Digital World” (Purcell et al., 2012) claimed that both “teachers and students alike report that for today’s students, ‘research’ means ‘Googling’” (p. 3). In that same report, 42% of the instructors who said they had their students use cell phones in the classroom said that they had students look up information during class (p. 32). Beyond teaching mobile-adapted information literacy skills, OWC instructors that require students to access and use library databases for their research projects might need to verify that the institution’s databases are adequately designed for mobile interfaces and/or suggest that students find alternative Internet access (e.g. institutional and library computer labs) for such work.

Many of the social media applications readily available for mobile devices promote community building per OWI Principle 11 (pp. 23-24) as well as sharing and providing feedback on specific texts. There are a multitude of mobile applications that promote sharing and communicating about texts; these applications easily could support both peer and instructor reviews and comments of works in progress as well as final drafts. In discussing major methods for incorporating social media (most of which have at least one mobile application) into teaching and learning, Tanya Joosten (2012) specifically mentioned increasing communication and encouraging contact, developing a richer learning environment, and building cooperation and feedback through dialogue.

Learning from a mobile device has some challenges, as one could easily surmise. A. Smith (2012c) reported that survey participants said mobile phones can make “it harder to give people your undivided attention” and more difficult “to focus on a single task without being distracted.” Some scholarship about distance learning already has discussed the need for students to be highly focused, extremely motivated, and self-regulated learners (e.g., Artino & Jones, 2012; Briggs & Wagner, 1997; Harnet, St. George, & Dron, 2011; see also Chapter 13); and it appears that distance students participating in their online courses through mobile devices may need to be even more focused. Requiring that

students monitor and reflect upon their own time management may help with these issues; there are mobile applications that students can use to help manage and monitor time management.

GOTTA GO: OWI PROFESSIONAL DEVELOPMENT AND MOBILE DEVICES

These pedagogical suggestions cannot simply be added on top the responsibilities of an OWI teacher. While the following discussion begins to add to faculty professional development workload, it also provides suggestions for how OWI WPAs and faculty might start learning about mobile learning per OWI Principle 7 (pp. 17-19). According to data collected by the CCCC OWI Committee (2011c), most instructors of fully online and blended/hybrid courses have participated in some formal training for online teaching and online course design; however, most have not worked with instructional technology specialists or collaborated with colleagues to help design a course. Respondents also mentioned some of the following types of activities as “essential” for faculty training: sharing/interaction with peers and colleagues, training taught by other faculty, informal/group discussions, faculty mentorship and collaboration, and support network. Developing collegial and casual faculty and staff learning communities can provide the continual professional development opportunities OWI need, especially to adapt to continuously changing technologies like the variety of mobile devices (Harrington, Rickly, & Day, 2000; Hewett & Ehmann, 2004; Rodrigo, 2009).

Based on the need to be universally inclusive and accessible, WPAs and faculty in OWI programs need to become increasingly aware of how any of the required technologies function in different types of mobile environments. Instead of passively waiting to see how the LMS or packaged textbook website will manage mobile devices, OWI administrators and faculty need to engage actively in discussions with representatives from IT and the LMS companies. Faculty and staff from the institution can consider combining the need to aggressively test and engage different types of mobile devices with faculty professional development. Faculty with different makes and models of mobile devices can test the various applications and share the results with the rest of the writing program and institution.

Instructors, even institutional IT departments, cannot possibly know and support every make, model, and operating system of mobile devices; instead, administrators, WPAs, and faculty, as well as other technical and student support personal, should embrace the diversity of devices. To help increase awareness regarding the functionality of different devices, institutions might develop faculty and staff learning communities that continuously explore pedagogical affordances as well as other topics, issues, and policies related to mobile learning. Within a large enough group, faculty and staff hopefully will own different mod-

els of devices. They can play within online course environments and share the results of working within specific LMSs and other learning applications. Similarly, meeting and dialoging as a group allows faculty to share not only experiences and instructions on how to function within a given device or application but the opportunity to discuss pedagogical reasons and ideas for critically incorporating and supporting mobile devices. The group can start to collect, develop, and share resources collaboratively.

In short, most of these ideas about building community to support OWI faculty learning about and incorporating mobile learning into their pedagogical strategies, suggest a twist of OWI Principle 11: *Online writing teachers and their institutions should develop personalized and interpersonal online communities to foster student and faculty success* (pp. 23-24).

HERE GOES: INSTITUTIONS SUPPORTING MOBILE DEVICES AND OWI

In an EDUCAUSE report discussing how to best support mobile growth on campuses, Eden Dahlstrom, Tom de Boor, Peter Grunwalk, and Martha Vockley (2011) emphasized the need for a “balanced approach to mobile development” that accounts for developing resources for the mobile Web, native apps, and/or mobile frameworks (p. 5). In a Gartner report about Bring Your Own Device (BYOD) strategies in the workplace, David A. Willis (2012) similarly emphasized a balanced approach that goes beyond just the technology that includes “policy, software, infrastructure controls and education in the near term, and with application management and appropriate cloud services in the longer term” (p. 2). Especially if OWI administrators have collected data about mobile device ownership and usage patterns in their specific programs, they will be prepared to have meaningful conversations with the Chief Information Officer (CIO) and other IT administrators at their institutions. CIOs in higher education know that mobility matters and to continue moving forward they must collaborate with administrators and faculty. In a discussion about IT in higher education in 2020, symposium participants most commonly identified faculty as institutional stakeholders (p. 6) and that CIO’s need to be “date-maker[s]” to facilitate productive collaborations (Grajek & Pirani, 2012). To help the institution develop mobile learning support mechanisms so that OWI instructors can focus on the teaching of writing per OWI Principle 2 (p. 7), OWI administrators and instructors should reach out to the IT leaders on their campus to proactively start these discussions.

No matter what, if campuses are sincerely promoting a BYOD environment, they need to make sure that student introductions to LMS environments do not assume the use of any given device, browser, or application. Instead, institution-

al introductory materials should promote both the teaching and learning of the environment by both demonstrating what the environment should generally look and function like, and, more importantly, provide learning activities that prompt students to engage in the environment from and with their own devices. When asked about the delivery format of student orientation for fully online and/or hybrid/blended courses, the respondents to the CCCC OWI Committee's surveys implied that most of the options, especially those offered by the institution, were extremely static, lacking any opportunity for students to interact and play with the online learning environments (CCCC OWI Committee, 2011c). Students needed time and prompting to explore how to use the specific online learning environment with their specific devices per OWI Principle 10 (pp. 21-23). Students should have the opportunity to test their individual devices and receive feedback and any required support prior to the start of a specific course per OWI Principle 10. Institutions or OWI programs might even want to start device-specific users groups that invite faculty, staff, and students to explore and support one another; the user groups would also need to reach out to and support the truly geographically distant online students as well.

OWI WPAs and faculty need to talk about mobile learning beyond just understanding how it impacts their OWCs; they also need to be in serious discussions with institutional LMS decision makers. If the online writing program theoretically and pedagogically privileges student-student interaction, OWI administrators and faculty need to emphasize heavily the need for LMS mobile applications that do more than access online course materials. Students definitely prefer working within native mobile applications in comparison to mobile Web browsers, primarily because the mobile applications are generally faster and easier to use (Bowen & Pistilli, 2012). Although experts may worry about the lack of diversity or "closed gardens" that will emerge if apps dominate the access and use of the Internet (Anderson & Rainie, 2012, p. 7), they acknowledge that apps make it more streamlined for people to do what they want to do and, therefore, they will continue to be preferred and grow as a favored method for accessing the Internet (p. 6).

Not only will OWI administrators and faculty want to participate in discussions about campus-wide technology adoptions, they also will want to be in on discussions about supporting students, as well as a growing number of faculty, who use mobile devices to teach and learn in online environments.

CONCLUSION AND RECOMMENDATIONS

Alan K. Livingston (2009) claimed that no one noticed the "revolution" of mobile phones and multimobile services in higher education. Specifically, he

claimed the Internet “changed everything” while the mobile revolution “changed nothing,” especially because faculty and staff in higher education have not realized what is going on. Instructors in and administrators of OWI programs cannot ignore the growing use of mobile devices. Instead, OWI programs must acknowledge mobile devices are here to stay, students are using them to access and interact in OWCs, and there will be no streamlining of the mobile platforms and/or applications. Dialogs with IT administrators, professional development, support of OWI faculty and students, and OWC material and assignment designs all must consider the various affordances and constraints associated with mobile learning.

The following recommendations may help OWI WPAs and teachers to integrate mobile devices into their thinking and OWCs:

- Student technological access is no longer just divided by Macs and PCs or different browser applications. As such, instructors, WPAs, and institutions need to be thinking about students both accessing *and* completing work (i.e., writing papers) on smartphones and tablets with different operating systems.
- Check OWCs for usability, or at least check the institutional LMSs, with all major brands of devices and interface operating systems. Develop faculty and staff learning communities to share this work and its results.
- Research your own student population to develop appropriate course, programmatic, and/or institutional support materials (especially to help students test and prepare their devices for working in the online course environment *before* the term begins).
- Take advantage of students’ access to mobile devices when designing assignments. Emphasize process; have students reflect on the affordances and constraints of production and consumption of texts in mobile environments.
- Help students support one another with “teach/learn the technology” assignments. Also take advantage of mobility with space- and location-aware assignments. In keeping with the advice offered in Chapter 15, there is no need to give up multimodal assignments; many mobile platforms include robust multimodal recording and editing applications as well.

NOTES

1. Gartner is a prominent information technology company. Gartner’s Hype Cycle for technology adoption includes the following phases: Technology Trigger, Peak of Inflated Expectations, Trough of Disillusionment, Slope of Enlightenment, and Plateau of Productivity.

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