Summary and Further Resources

Abstract

Chapter 4 of Library Technology Reports *(vol. 50, no. 8), "Selecting and Evaluating the Best Mobile Apps for Library Services," includes thoughts about the next steps for mobile technology and resources for further exploration, including a list of core mobile apps; blogs, articles, books, websites; and online courses.*

What's Next for Mobile Technologies?

Once you immerse yourself in the world of mobile apps and use them for work, productivity, writing, creating, and professional development, you'll get a real sense of their potential for education and content creation. You'll see how natural user interfaces make computing less about the device itself and more about what you can do with it.

The world of mobile technology is quickly moving beyond smartphones and tablets with the use of everything from wearable technologies (such as fitness tracking wristbands or Google Glass) to technologies that turn any physical object into a touchscreen.[1] There is also quite a bit of progress with technologies known as "The Internet of Things."[2] That's a term used to describe a world where humans, animals, and objects have sensors with unique identifiers and have the ability to transfer data without direct human interaction. Your "things" can communicate with each other in order to coordinate their activities.[3]

As with any technology, there are both dystopian and utopian futures described by many, especially about wearable technologies like Google Glass.[4] As always, it's up to us as informed citizens to build and influence positive experiences with these technologies.

What are some good ways to keep up with the changing world of mobile technologies? We can test new technologies, as did the Marcellus (NY) Free Library with Google Glass.[5] We can attend conferences outside of the usual sphere of library science conferences, such as Computers, Freedom, and Privacy,[6] and we can follow the work of organizations that defend civil liberties and privacy in the digital world, such as EFF (Electronic Frontier Foundation) and EPIC (Electronic Privacy Information Center).[7]

I hope you will encourage experimentation with these new mobile technologies, followed by analysis and reflection.

Core Mobile Apps: A List

The following is a list of important apps to know about. Be aware that sometimes these apps get purchased by other companies or change the location of their websites. If a link no longer works, do a web search for "[app name] iOS" or "[app name] android."

If you have a new mobile device, in addition to the built-in apps, start with these.

- note taking: Evernote[8]
- cloud storage: Dropbox or Box[9]
- saving webpages for offline reading: Instapaper or Pocket[10]
- social media: Twitter, Instagram, Facebook, Pinterest, Foursquare[11]

- calendar: Fantastical (iOS only)[12]
- secure password generation and storage: 1Password or LastPass[13]
- e-reading: iBooks (iOS only) and Kindle[14]
- phone calls: Skype and Google Voice[15]
- magazines: Zinio and Next Issue[16]
- custom news feeds: Feedly and Flipboard[17]
- streaming radio and podcasts: TuneIn Radio and Stitcher[18]
- scanning documents: JotNot Pro (iOS only) or Genius Scan[19]

There are many other apps to use for news, reference, productivity, writing, multimedia, speech recognition, interactive e-books, art, drawing, photo editing, music listening, music creation, and other educational topics.

So this list is only a starting point. If I had just received my first mobile device, I would install these apps first.

If you want to go beyond these, see my book, *Best Apps for Librarians: Using the Best Mobile Technology to Educate, Create, and Engage.*[20] It contains descriptions and use cases for over 100 apps that are important to know about for educational and professional use by librarians.

The book includes app recommendations for the following topics:

- reading
- productivity
- research and reference
- taking notes and writing
- multimedia
- social media
- communication
- content creation and curation
- showcasing special collections
- going beyond the library catalog
- professional development

For a more detailed table of contents, see the book's website: http://apps4librarians.com/thebook.

Blogs and Websites

The following apps, blogs, and websites are a great way to keep up with new apps of quality.

Android Apps Review, www.androidappsreview.com. Full reviews of Android apps in categories such as books, business, education, medical, music, and news.

Android Tapp, www.androidtapp.com. Reviews of Android apps in categories such as finance, health and fitness, multimedia, music, news and weather, photography, reference, travel, and more.

AppAdvice, http://appadvice.com. Contains iPhone/iPad news, reviews, lists, and guides to the best apps by

function, such as flight trackers, apps to replace your camera, personal databases, and more.

Appitic, www.appitic.com. A directory of apps for education by Apple Distinguished Educators (ADEs). The focus is on the K–12 age group, and there is also much here for adult learners. It's organized in interesting ways, including by subject, by Bloom's Taxonomy, and by multiple intelligences, and it includes apps for special needs, apps for the "flipped classroom," and apps for teachers.

AppStart for iPhone, http://itunes.apple.com/us/app/appstart-for-iphone/id488613223?mt=8. Free iPhone app for browsing "starter kits" of apps for many categories.

Appotography, http://appotography.com. The world of photography apps is huge. Since photography can be used in so many ways, especially in education, it's good to keep up with the best photography apps. Covers iPhone, iPad, Mac, camera add-ons, and more.

Beautiful Pixels, http://beautifulpixels.com. If you care about excellent user interface design, this is the blog to follow. The writing team selects and reviews apps with outstanding design features. Covers apps for iPhone, iPad, Mac, Android, web, and more.

Boing Boing's Apps for Kids, http://boingboing.net/tag/appsforkids. Apps for Kids is Boing Boing's podcast about smartphone apps for kids and parents by Mark Frauenfelder and his ten-year-old daughter.

MacRumors Buyer's Guide, http://buyersguide.macrumors.com. If you are wondering about the best time to buy or upgrade your iOS devices, visit this buyer's guide. For each device (iPhone, iPad, iPad Mini, iPod Touch, iPod Shuffle, iPod Nano, iPod Classic), you can find out when it was last updated so that you can avoid buying a new device right before a new version is announced. For each device the guide recommends "Buy Now," "Neutral," "Caution," or "Don't Buy." It also provides details such as photos of the device, last release date, number of days since update, and links to rumor sites about upcoming releases.

Macworld App Guide, www.macworld.com/category/ios-apps. Reliable site containing app reviews for iOS devices.

Mobile Apps News, http://nicolehennig.com/mobile-apps-news. Free e-mail newsletter by the author of this report. Twice-monthly news about mobile apps for educational use.

Touch Press Blog, www.touchpress.com/blog. Blog by the publisher of beautiful interactive book apps for iPad, such as *The Elements*, *Beethoven's 9th Symphony*, and *Leonardo da Vinci Anatomy*. Follow it to keep up with Touch Press's new titles.

Books

Good for Background on Apple Devices

Carlson, Jeff. *The iPad Air and iPad Mini Pocket Guide.* San Francisco, Peachpit Press, 2014.[21] Good book for beginners for an overview of the basic functions of your

iPad. The author has written many helpful technology books over the years.

Pogue, David. *iPhone: The Missing Manual,* 7th edition. Sebastopol, CA: O'Reilly, 2013.[22] An easy reference for those new to the iPhone. Full of practical tips. Look for possible newer editions that match your iPhone at the time you read this.

Mobile Technology for Those with Special Needs

Brady, Lois Jean. *Apps for Autism: An Essential Guide to Over 200 Effective Apps for Improving Communication, Behavior, Social Skills, and More!* Arlington, TX: Future Horizons, 2012.[23] Written by a speech-language pathologist who specializes in autism spectrum disorders, this book discusses over 200 apps that help with communication, behavior, and social skills. Includes success stories showing how these apps are helping those with autism.

Brisbin, Shelly. *iOS Access for All: Your Comprehensive Guide to Accessibility for iPad, iPhone, and iPod Touch.* Self-published, 2014.[24] This book is a comprehensive look at the accessibility features of iOS devices. It's available in EPUB format optimized for Apple's iBooks reader and tagged to provide maximum accessibility for screen readers. It includes detailed descriptions of how to use all the built-in accessibility features, information on how they work in Apple's apps, and a chapter on the best third-party apps that are accessible.

Smith, Kei. *Digital Outcasts: Moving Technology Forward without Leaving People Behind.* Waltham, MA: Morgan Kaufmann, 2013.[25] *Digital outcast* is a term for a person who is left behind the innovation curve of new technology for any of multiple reasons. This is an excellent book for gaining a nuanced approach to how we define and view people with "disabilities" and makes the point that we are all disabled (or will be) in one way or another at different points in our lives. It includes a detailed overview of how people with disabilities use technology, and it shows how creating accessible interfaces benefits everyone.

Mobile Ecosystems

Harvell, Ben. *iConnected: Use AirPlay, iCloud, Apps, and More to Bring Your Apple Devices Together.* Indianapolis, IN: Wiley, 2013.[26] This book contains useful instructions for using your devices together, such as displaying your iPhone on an HDTV and effectively using iCloud for synchronization.

Levin, Michal. *Designing Multi-Device Experiences: An Ecosystem Approach to Creating User Experiences across Devices.* Sebastopol, CA: O'Reilly, 2014.[27] This book is written for product managers, designers, and entrepreneurs, but it is a useful read for anyone interested in excellent user experience. In our multi-device world, people often switch between smartphones, tablets, computers, wearables, and televisions to accomplish a task. The book combines theory and practice, offering many real-world examples in a highly readable way. These principles can be applied to designing better experiences for library users.

Libraries and Mobile Technology

Lankes, R. David. *Expect More: Demanding Better Libraries for Today's Complex World.* Self-published, 2012.[28] This excellent book is written for library users and stakeholders to get them thinking about the potential of libraries. Use with your communities to encourage discussions about how libraries are more than storehouses of books. This book is also available for free on the web: http://medium.com/p/c9efcfa6bd24.

Miller, Rebecca K., Heather Moorefield-Lang, and Carolyn Meier. *Rethinking Reference and Instruction with Tablets*, eEditions e-book. Chicago, IL: ALA Editions, 2013.[29] Firsthand accounts of library projects using tablets for reference and instruction.

Miller, Rebecca K., Heather Moorefield-Lang, and Carolyn Meier. *Tablet Computers in the Academic Library*, eEditions e-book. Chicago, IL: ALA Editions, 2014.[30] Case studies and best practices for using tablets in the academic library and classroom.

Nichols, Joel A. *iPads in the Library: Using Tablet Technology to Enhance Programs for All Ages.* Santa Barbara, CA: Libraries Unlimited, 2013.[31] A book full of specific programs and projects for use with iPads or other tablets in the library. Includes projects for children, teens, and adults. Each project lists the apps needed, planning notes, and detailed instructions for the activity.

Walsh, Andrew. *Using Mobile Technology to Deliver Library Services: A Handbook.* Lanham, MD: Scarecrow Press, 2012.[32] Examples and case studies of using mobile technology in academic libraries.

Finding the Best Apps

Hennig, Nicole. *Apps for Librarians: Using the Best Mobile Technology to Educate, Create, and Engage.* Westport, CT: Libraries Unlimited, September 2014.[33] A guide to the best apps for librarians to recommend to their communities and for use in their own professional work. This book contains descriptions and use cases for over 100 apps. See the full table of contents: http://apps4librarians.com/thebook.

Hennig, Nicole, and Pam Nicholas. *Best Apps for Academics: A Guide to the Best Apps for Education and Research.* Self-published, 2014. http://bestappsforacademics.com. A guide to the best apps for students and professors in the categories of productivity; reading and annotating; research and reference; taking notes, writing, and studying; collaboration and sharing; and presenting, lecturing, and publishing. It includes discipline-specific examples and guides and a list of further resources.

Articles and Reports

The following articles are recommended for learning more about the topics in this report.

Statistics on Mobile Apps Use

Clark, Wilma, and Rosemary Luckin. *What the Research Says: iPads in the Classroom.* London Knowledge Lab, 2013.

http://digitalteachingandlearning.files.wordpress
.com/2013/03/ipads-in-the-classroom-report-lkl.pdf.
Useful research report from the United Kingdom with
implications for decision makers and different user
groups.

Columbus, Louis. "IDC: 87% of Connected Devices
Sales by 2017 Will Be Tablets and Smartphones."
Forbes, September 12, 2013. www.forbes.com/sites/
louiscolumbus/2013/09/12/idc-87-of-connected-devices-
by-2017-will-be-tablets-and-smartphones. Summary of
statistics from IDC, including the prediction that tablets
will outsell desktop and laptop PCs later this year.

Common Sense Media. *Zero to Eight: Children's Media Use
in America 2013*. San Francisco: Common Sense Media,
Fall 2013. www.commonsensemedia.org/research/
zero-to-eight-childrens-media-use-in-america-2013.
Based on surveys of parents of children ages 0–8 in the
United States, study showing how children's behavior has
changed in relation to books and reading, music, and the
use of smartphones and tablets.

comScore. "comScore Introduces Mobile Metrix 2.0,
Revealing That Social Media Brands Experience Heavy
Engagement on Smartphones." News release, comScore,
May 7, 2012. www.comscore.com/Insights/Press_
Releases/2012/5/Introducing_Mobile_Metrix_2_Insight_
into_Mobile_Behavior. A report with many statistics about
mobile use, including the fact that approximately 82
percent of time spent with mobile media happens via apps.

Digital Book World. "Pew: More Americans Using
Smartphones for Internet." Digital Book World,
September 16, 2013. www.digitalbookworld.com/2013/
pew-more-americans-using-smartphones-for-internet.
Summary of Pew statistics, including the fact that the
proportion of US adults who use smartphones to access
the Internet has doubled since 2009 to 63 percent.

Dunn, Jeff. "Why Mobile Learning Is Inevitable." Edudemic,
June 5, 2013. www.edudemic.com/why-mobile-learning-
is-inevitable. Summary of a presentation called "Mobile
Is Eating the World," by Benedict Evans (slides included),
with many useful statistics that show why the future is
mobile.

Johnson, Larry, Samantha Adams Becker, Victoria Estrada,
and Alex Freeman, *NMC Horizon Report: 2014 Higher
Education Edition* (Austin, TX: New Media Consortium,
2014), www.nmc.org/publications/2014-horizon-report-
higher-ed. Useful in-depth report that comes out every
year. In the 2014 edition, read about the "Shift from
Students as Consumers to Students as Creators," the
"Growing Ubiquity of Social Media," and more. The 2013
report (www.nmc.org/publications/2013-horizon-report-
higher-ed) included information on the rise of tablet
computing.

May, Kevin. "Mobile Web Accounts for Just a Fifth of Time
Spent on Devices, Apps Reign Supreme." TNooz, May 10,
2012. www.tnooz.com/article/mobile-web-accounts-for-
just-a-fifth-of-time-spent-on-devices-apps-reign-supreme.
Useful summary of ComScore statistics, focusing on
how users tend to stick with the app instead of the web
version of popular sites like Facebook.

Purcell, Kristen, Alan Heaps, Judy Buchanan, and Linda
Friedrich. "How Teachers Are Using Technology at Home
and in Their Classrooms." Pew Research Internet Project,
February 28, 2013. www.pewinternet.org/2013/02/28/
how-teachers-are-using-technology-at-home-and-in-their
-classrooms. Report includes information about the use of
mobile devices in the classroom, including the fact that
73 percent of teachers surveyed said that they or their
students use mobile phones in the classroom to complete
assignments. Discusses benefits and challenges of these
technologies.

Youth and Media. "Report: Teens and Technology
2013." Youth and Media, March 13, 2013. http://
youthandmedia.org/report-teens-and-tech. Summary
of latest findings from Pew Research about teens and
technology, including the fact that 78 percent of teens
now have a cellphone and 47 percent of those with
cellphones own smartphones.

Special Needs and Assistive Technologies

AppsGoneFree. "Apps for the Deaf and Hearing Impaired."
AppAdvice, accessed July 8, 2014. http://appadvice
.com/applists/show/apps-for-the-deaf. Annotated list of
several useful apps for the hearing impaired and how
they work.

Aquino, Steven. "Re-Enabled: iOS's Impact on Those with
Impairments Isn't Just a Marketing Slide; It's Profound."
The Magazine, no. 9 (January 31, 2013). http://the
-magazine.org/9/re-enabled. Article by an author, who
is legally blind, and who works with preschool children
with special needs. He discusses how and why the iPad
is extremely empowering for students and staff and
how it keeps the kids engaged far more effectively than
conventional tools.

Cameron, Jenna. "Winnipeg Student Uses iPad to Speak
First Words." CBC News September 23, 2013. www.cbc
.ca/m/touch/canada/manitoba/story/1.1864750. Story
of a seven-year-old girl with a congenital disorder that
prevents speaking, showing how she's communicating
via her iPad using apps such as TouchChat.

Hendren, Sara. "All Technology Is Assistive: Six Design
Rules on 'Disability.'" Medium, October 16, 2014.
http://medium.com/backchannel/all-technology-is
-assistive-ac9f7183c8cd. Article makes the case that
it's wrong to divide the world into disabled and not
disabled and that we are all disabled in different ways
and times in our lives. Encourages designers and
everyone to pay more attention to disability matters,
with six principles for designers.

"iOS. A Wide Range of Features for a Wide Range of
Needs." Apple, accessed July 8, 2014. www.apple.com/
accessibility/ios. Apple's pages explaining accessibility
features—a helpful illustrated guide.

Kornowski, Liat. "How the Blind Are Reinventing the
iPhone." *The Atlantic*, May 2, 2012. www.theatlantic
.com/technology/archive/2012/05/how-the-blind-are
-reinventing-the-iphone/256589. Inspiring article about
how the iPhone has turned out to be as revolutionary

as Braille for blind users. Specific stories with details of how and why the iPhone works so well.

New Roles for Libraries: Going Beyond Collections of Books

Batykefer, Erinn, Laura Damon-Moore, and Christina Jones. The Library as Incubator Project, accessed July 8, 2014. www.libraryasincubatorproject.org. A site that advocates for libraries as incubators of the arts.

Chant, Ian. "Opening Up: Next Steps for MOOCs and Libraries." *Library Journal*. December 10, 2013. http://lj.libraryjournal.com/2013/12/digital-content/opening-up. Article discussing an academic library offering its own MOOCs and a public library using a MOOC as the foundation of a summer reading program. Makes the case that libraries are well placed to be part of experiments with MOOCs.

Creative Making for Libraries and Museums. Dysart and Jones, accessed July 8, 2014. www.creativemaking.org/2013-toronto-program.html. Website for a symposium held in July 2013 that focused on creative making in libraries and museums, with examples of makerspaces, fab labs, and more.

Digital Book World. "Four Local Libraries Honored for Offering Cutting-Edge Services." Digital Book World. February 4, 2014. www.digitalbookworld.com/2014/four-libraries-offering-cutting-edge-digital-services. Story of four libraries honored by ALA for offering cutting-edge technology services, including services for easy video creation by faculty and students and using Instagram's API to capture photos tagged with the library's hashtag and displaying them online and in the library.

Farkas, Meredith. "Libraries as Publishers: Our Push to Change the Publishing Landscape." *American Libraries*, September 17, 2013. www.americanlibrariesmagazine.org/article/libraries-publishers. Article exploring the role of libraries in enabling publishing—in the case of public libraries, through publishing the work of the library's constituencies, and in the case of academic libraries, through publishing open-access work.

Godin, Seth. "The Future of the Library." *Seth Godin* (blog), May 16, 2011. http://sethgodin.typepad.com/seths_blog/2011/05/the-future-of-the-library.html. Blog post describing librarians as people who can bring domain knowledge and access to information, helping users create and invent.

Morozov, Evgeny. "Making It: Pick Up a Spot Welder and Join the Revolution." *New Yorker*. January 13, 2014. www.newyorker.com/arts/critics/atlarge/2014/01/13/140113crat_atlarge_morozov. Essay about the "maker movement," its history, and where it could go.

Nawotka, Edward. "A Visit to BibiloTech: The 21st Century All-Digital Library." Publishing Perspectives, January 22, 2014. http://publishingperspectives.com/2014/01/a-visit-to-bibliotech-the-21st-century-all-digital-library. The story of an all-digital public library in San Antonio, Texas. It loans out e-readers for home use. Discusses how economical the library was to build compared to other public libraries with print collections.

Peterson, Andrea. "Digital Age Is Forcing Libraries to Change." *Washington Post*, August 7, 2013. www.washingtonpost.com/blogs/the-switch/wp/2013/08/07/the-digital-age-is-forcing-libraries-to-change-heres-what-that-looks-like. Article all about the digital commons at the Martin Luther King Jr. Memorial Library in Washington, DC. Users may try out e-book readers, a 3-D printer, the Skype station, a co-working space, and more.

Peterson, Andrea. "Need to Use a 3-D printer? Try Your Local Library." *Washington Post*, August 1, 2013. www.washingtonpost.com/blogs/the-switch/wp/2013/08/01/need-to-use-a-3-d-printer-try-your-local-library. A story on library 3-D printing services, focusing on the Martin Luther King Jr. Memorial Library in Washington, DC.

Rendon, Frankie. "The Changing Landscape for Libraries and Librarians in the Digital Age." TeachThought, November 16, 2013. www.teachthought.com/literacy-2/changing-landscape-libraries-librarians-digital-age. Article discussing why libraries are more relevant than ever, with librarians offering digital services, technology training, and serving as key partners in community relations.

Resnick, Brian. "The Library of the Future Is Here." Business Insider, January 25, 2014. www.businessinsider.com/library-of-the-future-2014-1. Article describing libraries not as warehouses of books, but as services and tools for the commons.

Sipley, Gina. "Surprise! It's the Golden Age of Libraries." Mic.com, October 11, 2013. www.policymic.com/articles/67457/surprise-it-s-the-golden-age-of-libraries. Article on re-imagining the library as digital space, with books no longer the focal point.

Stinson, Susan. "Writers in Residence at Forbes Library: Three Programs." Library as Incubator Project, December 5, 2013. www.libraryasincubatorproject.org/?p=12843 (accessed July 8, 2014). Article by a writer describing her experience as writer-in-residence at Forbes Library in Northampton, Massachusetts.

Tennant, Roy. "The Mission of Librarians Is to Empower." The Digital Shift, January 15, 2014. www.thedigitalshift.com/2014/01/roy-tennant-digital-libraries/mission-librarians-empowerment. Opinion piece discussing many of the ways we empower our users and communities—increasing knowledge, providing access to tools, and more.

The Future of User Interfaces: Mobile and Beyond

Anderson, Chris, and Michael Wolff. "The Web Is Dead: Long Live the Internet." *Wired*, August 17, 2010. www.wired.com/magazine/2010/08/ff_webrip/all. Interesting discussion of the move from the Web to apps.

Brownlee, John. "How Flat Design Is Preparing iOS for the Gadgets of Tomorrow." Fast Company, October 24, 2013. www.fastcodesign.com/3020586/how-flat-design-is-preparing-ios-for-the-gadgets-of-tomorrow. A look at how Apple's flat design that began with iOS 7 is going to work well with the design of car systems and watches

since flat design icons can be resized by just expanding the colors at their edges and filling the remaining space. This will work well on curved displays, such as watches that wrap around your wrist. Flat design will also make it easier to move to 3-D displays.

Colliander, James, Ian Fordham, and Aron Solomon. "Ten Themes That Will Define the Next Decade of EdTech." Betakit, October 15, 2013. www.betakit.com/ten-themes -that-will-define-the-next-decade-of-edtech. A prediction of themes defining the next decade in educational technology, including collaboration, mobile, open data, and more.

della Cava, Marco. "Beyond a Gadget: Google Glass Is a Boon to the Disabled." *USA Today*, October 23, 2013. www .usatoday.com/story/tech/2013/10/22/google-glass-aids -disabled/3006827. Interesting story of how Google Glass is used by people with various disabilities and how it reduces the time between intention and action, something useful to all users. Being hands-free and voice-activated, it's a very helpful device for many situations.

Holland, Beth. "5 Myths about Writing with Mobile Devices." Edudemic, April 26, 2013. www.edudemic .com/5-myths-about-writing-with-mobile-devices. Excellent article about how writing is not just keyboarding and word processing, but is much more, including the process of creating blogs, e-books, and curated digital magazines, all of which are done easily with apps and mobile devices.

Lenaerts, Sven. "The Future of User Interfaces." Tuts+, June 24, 2013. http://webdesign.tutsplus.com/articles/ the-future-of-user-interfaces--webdesign-13246. An article for web designers (and interesting for all) about the move away from graphical user interfaces towards natural user interfaces and away from metaphors like desktops towards direct manipulation.

Louis, Tristan. "Your Body Is the Computer." *Forbes*, July 27, 2013. www.forbes.com/sites/tristanlouis/2013/07/27/ after-mobile-your-body-is-the-computer. Article looking at the trend toward glasses and watches as technology devices and how we're moving away from PCs toward smartphones and then toward other smart devices more integrated with our bodies.

Mims, Christopher. "Why Every Gadget You Own Could Soon Take Voice Commands, Just Like Siri." Quartz, January 10, 2014. http://qz.com/165767/nuance-every -gadget-you-own-could-soon-take-voice-commands -just-like-siri. The story of how Nuance (the company that currently powers Apple's Siri) is offering licensing of its voice-control system to consumer electronics manufacturers, which could affect everything from smart thermostats to cars.

Quintal, Ryan. "The End of Keyboards: A Question of 'When?'" Design Shack, April 17, 2013. http:// designshack.net/articles/business-articles/the-end-of -keyboards-a-question-of-when. An article predicting that the keyboard era is coming to an end with

the prevalence of pen inputs, touch screens, voice commands, and more.

Sawers, Paul. "The Future of Handwriting." The Next Web, August 30, 2013. http://thenextweb.com/ insider/2013/08/30/the-future-of-handwriting. An article asking whether handwriting is going away in favor of keyboarding. Yes and no, according to this article, which discusses several interesting apps that use handwriting.

Vanhemert, Kyle. "Why *Her* will dominate UI design even more than *Minority Report*." *Wired*, January 13, 2014. www.wired.com/design/2014/01/will-influential-ui -design-minority-report. Article making the case that the way technology is portrayed in the movie *Her*—discrete, subtle, and human-centered—is where technology is headed and that this is a new era of personalized, intelligent apps.

Online Courses

Apps for Librarians and Educators

http://apps4librarians.com

This course covers the best apps in several categories, such as reading, productivity, reference, and multimedia. Each week's lesson includes screencast demos of apps, provocative readings, discussion questions, and an optional live chat. You'll learn how to write app reviews, and you'll share them with your colleagues in a private class blog.

It's available as a five-week course via ALA e-learning or in a self-study version that you can purchase anytime and complete at your own pace.[34]

Some testimonials:

Before taking Apps4Librarians, I didn't realize there were so many apps that could be useful in educational settings. I look forward to sharing information about some of the apps I learned about in this course with my colleagues and possibly lead some workshops on specific apps.—*Ellen Lutz, Research Services Librarian in the Sciences, University of Texas at San Antonio*

Excellent course. This class exceeded my expectations. It provided a good mix of the practical and theoretical components of iOS and Android applications. Nicole is enthusiastic, encouraging, engaging and very knowledgeable.—*Maryjane Canavan, Head of Library Systems, University of Massachusetts, Amherst*

The Book as iPad App

http://apps4librarians.com/bookapps

This course covers multimedia, multi-touch e-books—the kind that are published as individual apps. We look at fiction, nonfiction, reference, children's books, and graphic novels. These book apps include many features that are useful for education, such as embedded videos, slideshows, quizzes, and more.

Each week's lesson includes screencast demos of apps, provocative readings, discussion questions, and an optional live chat. You'll learn how to write app reviews, and you'll participate in brainstorming sessions about how these apps can be used in library programs and services. By the end, you'll be familiar with what makes the best interactive reading experience and you'll be inspired with ideas for library programs using these apps.

This course is useful for anyone who cares about the future of the book and the blurring boundaries between book and app.

Available via Simmons GSLIS continuing education online or in a self-study version that you can purchase anytime and complete at your own pace.[35]

A testimonial:

> This course gets five stars not only for the information it contains, but also for the level of empowerment it provides. I signed up not knowing a thing about book apps, and in a month's time I am using them at work and collaborating with a library colleague to create a book app of our own for use in story times. The topic is timely, relevant and fun! I couldn't ask for more.—*Susan Hansen, Branch Manager, West Hartford Public Library, Hartford, CT*

iPads, Tablets, and Gadgets in the Library: Planning, Budgeting, and Implementation

Rebecca Miller, Carolyn Meier, and Heather Moorefield-Lang, www.alastore.ala.org/detail.aspx?ID = 3819

This online course, created by three librarians from Virginia Tech and published by ALA, covers practical topics such as doing a needs assessment of your community, getting funding, writing policies, training staff, case studies, and how to stay current. See their blog for their current offerings: http://tabletsinlibraries .tumblr.com.

More Courses

See http://nicolehennig.com/courses for my upcoming courses.

Keeping Current

To keep up with new courses, along with news about mobile apps for education, join the community of librarians who read *Mobile Apps News*: http://nicolehen nig.com/mobile-apps-news, my twice-monthly e-mail newsletter.

Notes

1. For many examples of wearable technologies, see this useful database of wearables, http://vandrico.com/ database, created by the Vancouver company, Vandrico. It categorizes and describes hundreds of devices by use, such as entertainment, fitness, gaming, industrial, lifestyle, medical, and pets. For information on fitness tracking wristbands, see the *Wikipedia article on Fitbit,* http://en.wikipedia.org/wiki/Fitbit. For information on Google Glass, see the Google Glass website, www.google.com/glass/start. For an article on new touchscreen technology, see Adam Clark Estes, "New Thermal Technology Turns the Entire World into a Touchscreen," Gizmodo, May 22, 2014, http://gizmodo.com/new-thermal-technology-turns -the-entire-world-into-a-to-1580098110.
2. To learn about the Internet of Things, see this report: Pew Research Center, *The Internet of Things Will Thrive by 2025* (Washington, DC: Pew Research Center, May 2014). Read the summary, www.pewinternet.org/ 2014/05/14/summary, or the full report, www .pewinternet.org/files/2014/05/PIP_Internet-of -things_0514142.pdf.
3. For interesting reading about how the Internet of Things may play out, see Bill Wasik, "In the Programmable World, All Our Objects Will Act as One," *Wired,* May 14, 2013, www.wired.com/2013/05/ internet-of-things-2/all.
4. An excellent summary of privacy issues is found in "Google Glass and Privacy," Electronic Privacy Information Center, accessed August 25, 2014, http://epic .org/privacy/google/glass. See also John Paul Titlow, "10 Compelling Ways People Plan to Use Google Glass," ReadWrite, March 7, 2013, http://readwrite .com/2013/03/07/10-compelling-ways-people-plan -to-use-google-glass#awesm = ~oICrgO6I9JVQmF.
5. Charley Hannagan, "Inside One Central New York Library's Google Glass Testing," Syracuse.com, June 10, 2014, www.syracuse.com/news/index.ssf/2014/06/ inside_central_new_york_librarys_google_glass_testing .html.
6. The Computers Freedom and Privacy Conference: www.cfp.org.
7. Electronic Frontier Foundation, www.eff.org and Electronic Privacy Information Center: http://epic.org.
8. Evernote: http://evernote.com.
9. Dropbox: www.dropbox.com; Box: https://www.box .com.
10. Instapaper: www.instapaper.com; Pocket: http://get pocket.com.
11. Twitter: http://about.twitter.com/download; Instagram: http://instagram.com; Facebook: www .facebook.com/mobile; Pinterest: www.pinterest.com; Foursquare: http://foursquare.com/download.
12. Fantastical: http://flexibits.com/fantastical-iphone.
13. 1Password: http://agilebits.com/onepassword; Last-Pass: http://lastpass.com.
14. iBooks: www.apple.com/ibooks; Kindle: www.amazon .com/gp/feature.html?docId = 1000493771.
15. Skype: www.skype.com/en/download-skype/skype -for-mobile; Google Voice: http://itunes.apple.com/ us/app/google-voice/id318698524?mt = 8.; Google Play store for Android: http://play.google.com/store/ apps/details?id = com.google.android.apps .googlevoice&hl = en.
16. Zinio: www.zinio.com/www/apps/desktop.jsp; Next Issue: www.nextissue.com.

17. Feedly: http://blog.feedly.com/mobile; Flipboard: http://flipboard.com.
18. TuneIn Radio: http://tunein.com/get-tunein; Stitcher: www.stitcher.com.
19. JotNot Pro: http://itunes.apple.com/us/app/jotnot-scan-multipage-documents/id307868751?mt=8; Genius Scan: http://thegrizzlylabs.com.
20. Nicole Hennig, *Apps for Librarians, Using the Best Mobile Technology to Educate, Create, and Engage:* http://apps4librarians.com/thebook.
21. *The iPad Air and iPad Mini Pocket Guide*, WorldCat listing: www.worldcat.org/oclc/859556364.
22. *iPhone: The Missing Manual*, link to publisher for purchase: http://shop.oreilly.com/product/0636920029052.do.
23. *Apps for Autism,* WorldCat listing: www.worldcat.org/oclc/706024901.
24. *iOS Access for All,* link to author's site for purchase: www.iosaccessbook.com.
25. *Digital Outcasts*, WorldCat listing: www.worldcat.org/oclc/835600879.
26. *iConnected*, WorldCat listing: www.worldcat.org/oclc/820108777.
27. *Designing Multi-Device Experiences*, WorldCat listing: www.worldcat.org/oclc/852807810; link to publisher for purchase: http://shop.oreilly.com/product/0636920027089.do.
28. *Expect More*, WorldCat listing: www.worldcat.org/oclc/797017489.
29. *Rethinking Reference and Instruction with Tablets*, link to ALA for purchase: www.alastore.ala.org/detail.aspx?ID=10861.
30. *Tablet Computers in the Academic Library*, link to ALA for purchase: www.alastore.ala.org/detail.aspx?ID=4025.
31. *iPads in the Library*, WorldCat listing: www.worldcat.org/oclc/816512996.
32. *Using Mobile Technology to Deliver Library Services*, WorldCat listing: www.worldcat.org/oclc/810119077.
33. http://apps4librarians.com/thebook.
34. Self-study version of Apps for Librarians and Educators on Udemy: www.udemy.com/apps4librarians/?couponCode=ALATECH.
35. Self-study version of the Book as iPad App on Udemy: www.udemy.com/bookapps/?couponCode=ALATECH.

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