The Digital Reading Experience: Learning from Interaction Design and UX-Usability Experts

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Abstract Now that e-books and digital devices are active in the marketplace, publishers need to incorporate usability and user experience research and practice in their development process. Interaction design and UX research is well established in technology-driven industries; publishers have much to learn from these experts, for the betterment of their digital product and eventually, broader adoption of e-books by their customers. This article highlights the work and opinions of three UX, research and design practitioners as a first step in launching a tidal exchange of knowledge and ideas.

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I remember the first time I picked up the new, first-generation Kindle and tried it out. I found it so hard to hold; the buttons seemed to be in the wrong place and on the wrong sides. The labels were hard to see. The color and feel of the exterior was off-putting. The screen text was, well … unsatisfactory. I thought: Don't these device makers like to read? Don't they like books? I put it down and didn't touch another Kindle for quite a while.

After a whirlwind 2010, a variety of improved digital reading devices are now in the hands of customers, with various configurations, colors, screens, and displays. They all try to emulate the book reading experience, but they frequently fall short:

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when they do, another book customer is confirmed in his or her decision to stick with print.

We in the publishing industry need to stop and think about what makes print books almost always a happy and pleasant physical experience. And not only a physical experience: there's a reason why our current book formats have endured all this time that goes beyond convenience, economics, and lack of other options.

Books feel good. They operate well. It turns out that hundreds of years of publishing have field-tested for us the best ways to display text, to compose pages. Standard trim sizes are no accident, nor are the relative page counts of most books. It is not only economical; it *works* to hold books in these shapes, sizes, and weights. More than that, we readers have developed important habits and cues that keep us turning pages, finding our places, scanning and skimming—even inhaling—the text. Most readers want to transfer their established reading habits to the new technology; it is up to us to apply what we learn about the reading experience to the new technology of e-readers.

There is plenty of expertise out there that we can draw on, mostly coming from the technology-driven industries that power the digital book revolution. Product and software interface designers in the computer and Internet industries have long relied on experts in usability and user experience to guide their decisions. They know that the easier and more satisfying it is for customers to handle the equipment or interact with Web pages, the more likely they are to buy the device, order the product online, or view ads over many screens. We in digital books need to learn this and then gain influence in the decisions being made, both about how digital devices will be designed in future, and more immediately about how digital text is displayed. I sought out usability and design experts to see what they can offer that will help us move toward a better user experience for readers. Three of them appear in this article.

Analyzing Reader Experience

Steve Portigal, of consumer research firm Portigal Consulting[1] in Pacifica, California conducted a research project in the summer of 2009 called "Reading Ahead,"[2] on individual reading habits. Portigal's project presented some compelling arguments for serious and expert research into user habits and preferences. As the summary states:

- Books are more than just pages with words and pictures; they are imbued with personal history, future aspirations, and signifiers of identity.
- The unabridged reading experience includes crucial events that take place before and after the elemental moments of eyes-looking-at-words.
- Digital reading privileges access to content while neglecting other essential aspects of this complete reading experience.

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[1] www.portigal.com.

[2] http://www.slideshare.net/steveportigal/portigal-consulting-reading-ahead-research-findings-redux?from=ss_embed.

- There are opportunities to enhance digital reading by replicating, referencing, and replacing social (and other) aspects of traditional book reading.

Although the study gathered great feedback from individuals and professionals, he still doesn't see a lot of people trying to really rethink what it means for "analog activity to become digital activity."

Still, the primary goal of digital-book development should be creating good user experiences: creating things people can use that don't disappoint on some social, physical, or conceptual level that the designers and manufacturers hadn't known about or taken into account.

There exist, of course, basic principles, but "we're at that inflection point where we bring our analog expectations to digital. It's hard to adopt new technology if it's not done really well, and we don't have a model for a digital reading experience."

Show Readers What They Could Gain

The iPad is a big cultural story, said Portigal, because it changes our reading behavior. It is innovative and digital, but it isn't a book. "New behaviors are emerging as a result of digital experience," he explained. We can handle operations that change—for example, that have preference settings—and there are actions that are moot now (for example, removing the jacket from a hardcover book before reading). But there's so much potential for new functions and innovations; are readers ready for that? They lose something from not having the physical book, but don't yet know how much they may have to gain.

E-book designers and developers have to show it to them. Editors should "look for 'plus-ones'. What are some ways to do a value-add for the existing experience? Something provocative, *but* something that can be turned off!" Portigal suggests we tease and challenge the reader to learn more about what a digital reading experience can offer, and then let us know how they like or dislike a feature. Maybe readers will be able to navigate content based on reading expectations: What kinds of books do people read in bed? Before sleeping? In transit? Readers may want to choose their content based on feeling, word length, density of prose, device and platform, for different situations and activities.

After the study was published, Portigal and the design magazine *Core 77* co-sponsored a one-hour design challenge that drew provocative and boundary-hopping entries[3] that may, more than a year later, still inspire professionals to think outside the rectangle.

Open Standards Encourage Innovation

Open standards offer the greatest opportunities, in Portigal's (and others') opinion. Allowing developers to innovate with widgets and plug-ins has sparked great feature delivery for mobile and web consumers—why not in e-books?

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[3] http://www.portigal.com/blog/reading-ahead-core77-1-hour-design-challenge-winners/.

For his own reading (he is a Stephen King fan), Portigal still favors print. He was recently introduced to the iPad and liked it: "The most virtual-reality [device] I have tried: quite exciting and seductive." He would like a lower-than-hardcover price for a digital experience (audiobook versions just won't do; "it must be through the eyes"), but more convenience still isn't enough to convert him to digital. And he likes the shareability of print books, a feature already being tested by Amazon and Barnes and Noble—but with consequences that publishers will wrestle for some time to come.

Thinking on Both Sides of the Screen

When user-experience professionals turn their attention to digital reading and e-books, they tend to see both forest and trees. Whitney Quesenbery, principal at the research and consulting firm WQusability[4] and a devoted e-book consumer as well as usability expert, talked about how reading books could be transformed by going digital.

Quesenbery got right to one of the main points in the e-book discussion—the subject of multi-format accessibility. "I want to buy the book [once] and go back and forth between modes [of reading]. I'd even want to sync my audiobook version with my text version."

Like most good interactive design practitioners, she prefers to streamline the user's path to the content—fewer clicks, subscriptions, and versions. "*The New York Times* should be able to customize my subscriptions and digital delivery. I don't want to have to subscribe to five different versions of the *Times,* and I don't want to have to reduce my options."

Quesenbery's recent book, *Storytelling for User Experience,*[5] from the innovative publisher Rosenfeld Media,[6] is a model of her multi-format philosophy (the book can be purchased in two different multi-format packages that include print or printable, MOBI, ePub, and Adobe).

Her book carries the subtitle "Crafting Stories for Better Design." For the purposes of digital reading, she may as well reverse that line to "Crafting Design for Better Stories": The book's story (the experience) is inextricable from how the book is experienced; the book's design.

Kindle Gets It Almost Right

When it comes to digital platforms, Quesenbery is a Kindle fan. "It was love at first sight," she said. "Reading is an immersive activity, so Kindle is good: when reading a book, I am not multitasking. When I read on an iPad, there are all sorts of distractions."

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[4] http://www.wqusability.com/index.html/.

[5] http://www.rosenfeldmedia.com/books/storytelling/.

[6] http://www.rosenfeldmedia.com.

Other design choices seem particularly user-friendly and accessible, which are qualities of high importance: "It feels right in the hand, and not too heavy. The screen, with its soft gray instead of bright white background, is not as hard on the eyes; I can read the Kindle forever. And the power cord is industry-standard." Quesenbery stores 60-70 books on her device, sends documents for screen reading, and uses it as a clippings file.

But her ideal reading device is still over the horizon. Although she says, "I have the timing down so I can push the 'forward' button before I finish the last sentence of the page," she'd really like something better optimized for nonfiction: scaling graphics for diagrams and tables; travel-book features that combine GPS with dynamically served text; and (most important for frequent users of the Kindle's text-to-speech feature) "a 'dead-man's switch' to turn off the book when I fall asleep."

A Designer Deploys His Left Brain

One gift of the Web era is the flowering of interaction design as a professional discipline. Its practitioners have modeled mind-opening approaches to books and reading.

For more than a decade Web designers have found a practical, code-savvy, design-centered voice at A List Apart, founded in 1997 by Jeffrey Zeldman of the Web design firm Happy Cog. ALA (now a multi-platform publisher) showcases some brilliant thinking in a number of areas.[7] One recent feature earlier this year offered a compelling demonstration of Web design practice applied to iPad reading when Craig Mod,[8] a talented writer, designer and developer, published the article *A Simpler Page,* outlining how the concept of the book page can burst open when reconstructed on an iPad screen.[9]

A New Design Model and a Tool to Make It Happen

Mod shows how print design assumptions based, for example, on the kinetic properties of the book spine can hinder optimal text display on an iPad or tablet. He calls for a rethinking of the properties of the screen beyond the single page. Mod's contribution to this process, a set of optimized-for-the-iPad type templates called Bibliotype, makes it possible for publishers to follow his lead.[10]

Another multilayered, seriously analytical critique by Mod[11] (and a must-read for e-book developers) effectively pries open some dead-end thinking in e-book production and replaces it with solid suggestions for improvement (Mod does not neglect small but highly irritating problems, such as hyphenation and margin width)

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[7] http://www.alistapart.com.

[8] http://www.craigmod.com.

[9] http://www.alistapart.com/articles/a-simpler-page/.

[10] http://craigmod.com/bibliotype/demo/.

[11] http://craigmod.com/journal/ebooks/.

as well as the optimistic sense that it all can be done, and for the greater future glory of digital reading.

Meanwhile, publishers have diverging paths to follow. One is the task of emulating the print book on a digital device; of making the reader experience for dedicated print customers as satisfying in digital as it is on paper. The other is learning from and marshalling 20 years of experience with digital screen reading, display and navigation to point us toward a new way of seeing the book, and a new way of experiencing it.