



INTRODUCTION

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Way back in that earlier age of technology known as mid-2007, if you wanted to purchase a small, easy-to-use electronic device dedicated to reading books in electronic format, your choices were decidedly limited. A number of earlier devices (such as the Rocket eBook) had come and gone, burdened by dark, low-contrast LCD screens, bulky batteries, small memory capacity, and awkward usability. The *Wikipedia* page surveying e-book readers listed only six products.

Had you been listening to conversations within libraries about e-books at that time, you would have heard a lot of optimism for the e-book format, tempered by a healthy dose of skepticism. Libraries had long been intrigued about delivering texts to their patrons electronically because the advantages were many: digital copies are cheap, can be delivered on demand, and can be created on the fly, mitigating the need for extensive planning from the collections development staff.

But arguments were also being made that e-books might never live up to the hype. After all, we *knew* certain things. E-books are difficult to use. E-book readers strain the eyes far more than paper books. Our patrons don't read long-form works on the screen. Nobody owns these dedicated devices, and it's expensive for us to buy enough of them. And our patrons tell us they just like paper better.

In November 2007, online retailer Amazon announced that it would start selling its own e-book reader, called the Kindle. The Kindle represented a great leap forward in getting usable e-book technology into the hands (quite literally) of a mass audience for the first time. It was a lightweight, simple device that fit easily into a bag or coat pocket. It had a simple, intuitive interface, with dedicated buttons to flip pages and scroll up and down through a document. Memory was solid-state and abundant, meaning the device could hold immense amounts of text and images without fragile hard drives.

Amazon made it easy to load new e-books onto the device, even allowing customers to purchase new titles from the device itself. And the Kindle used a high-resolution “E-ink” display that, unlike typical back-lit computer screens, mimicked the appearance of paper.

The device, while far from perfect, wiped out a large chunk of the criticism against earlier e-book readers the day it launched. It was easy to use, it fit nicely in the hand, and it was no more or less hard to read than a trade paperback. And this time, it was backed by the biggest book retailer in the industry.

It is estimated that by mid-2010, with the Kindle already in its third generation, more than four million of them had been sold (Wilhelm, 2010). Backed by deals with major publishers and deeply integrated into Amazon’s own groundbreaking e-commerce system, it single-handedly created the first mass market for e-books.

For libraries, the question about e-books quickly shifted from “When?” to “What about us?” The Kindle platform was relatively closed, making interoperability with existing e-book distribution systems difficult. There were questions about its copy-protection software and distribution rights. But no one was asking when will e-books hit the mainstream anymore.

Another big leap in e-book reader technology was Apple’s introduction of the iPad, a touch screen tablet computer, in early 2010. A video was posted on YouTube (YouTube, 2010) a day or two after the first iPads were delivered to customers, and it has been viewed more than one million times. In it, a father (just off camera) hands his new iPad to his two-and-a-half-year-old daughter, bright eyed and adorable in her butterfly-print pajamas. Despite having never seen the iPad before, the little girl starts swiping through the choices, pressing buttons, and launching and closing applications within ten seconds. When a barely verbal child can deduce the basic operations of a computer (and despite the form factor and reduced interface, it most certainly is a computer) almost instantly, we are clearly dealing with a new kind of interactive experience.

The lesson for libraries about the Kindle and iPad is that it takes only one or two seminal products to turn “might happen someday” into “we have to do this now.” A banner ad on Amazon’s homepage, or the words “. . . and it will be in stores tomorrow!” from a grinning, be-turtlenecked Steve Jobs, and suddenly that future is here.

► DISRUPTIVE INNOVATION

E-book readers (and, more significantly, their attendant online bookstores) are just one innovation with the potential to impact the core business of libraries. There are dozens of them, starting with the World Wide Web itself

and including search engines, social networks, e-books, e-commerce, smartphones, *Wikipedia*, Google Books, recommendation and rating sites, location-aware networks, QR codes, digital television, online video, podcasting, blogging—the list can seem endless.

But the library world is by no means alone, as dozens of industries are struggling with the creative disruption wrought by a super-empowered, networked audience. The music and film industries find themselves in pitched battles against illegal downloads of their copyrighted materials and the increased competition afforded by lower production costs. Universities see potential threats in low-cost, online instruction. Newspapers seem to be fighting battles on every front, from social networks' ability to instantaneously spread stories, depriving them of scoops, to the global competition now one click away, to the high cost of printing thousands of paper copies daily, to the loss of revenue from classified ads supplanted by the likes of Craigslist. Magazines, television, academic journals, advertising—a vast segment of the global economy is coping with what economist Clayton Christensen (2003) has termed “disruptive innovation.” Christensen spent years studying why some businesses thrive and others die in the face of changing circumstances. His work describes how even well-managed companies that are responsive to their customers' needs can find themselves outperformed by others offering inferior products. Specifically, he examines how the markets for particular products behave when new competitors arise, making a distinction between “low-end disruption,” where innovators target an audience that doesn't need the full value of the best product in the market, and “new-market disruption,” where the new players find new markets that were unserved (or underserved) by existing products.

For libraries, the implication of the theory of disruptive innovation is that neither providing high-quality content nor offering free access will, by themselves, save us. Let's assume for a moment that libraries are an industry, offering a product (access to all kinds of information) to customers (our patrons) and arrayed against a host of innovative competitors. In Christensen's (2003) model, we are the incumbent supplier. There are many forms of information for which libraries had previously been the exclusive supplier, but now we compete against others on the web who offer a qualitatively inferior but easily procured product. Google and *Wikipedia* now compete with the reference librarian. Tax forms and government data are supplied by the agencies themselves on their own websites. Enough academic journals and peer-reviewed materials are freely available to offer a good start on most research projects. The list goes on.

Librarians take justifiable pride in the quality and value of the information products they produce and are passionate defenders of long-form text in print,

deep collections, and original sources. Google, we assure our patrons, doesn't contain even remotely close to everything. Yet the history of commerce is littered with the wreckage of innovative companies that made products that were far superior to those of their competitors. The important question isn't "Do libraries have better content?" but "Can our patrons get a 'good enough' version of what we offer somewhere else?" Where the answer to this last question is "yes," we need to act. And fast.

Another defense of libraries is that we give away that better product for free. However, much content on the web is free, as well. Our patrons are practically swimming in no-cost content, both within and without the library.

Libraries may offer cheaper and higher-quality resources than our other sources, but we're not necessarily easier to use. If we cost our patrons time, aggravation, and effort, they will certainly look around for less-stressful options. And there's more bad news: it's not just free against free. Precedents show that often people would rather *pay* for a good experience than endure a bad one for free.

As an example, look to Apple's launch of the iTunes Music Store in 2003. At the time of its launch, the illegal file-sharing service Napster had already come and gone and peer-to-peer file sharing was on the rise. Apple proceeded anyway with its new online music store, getting buy-in from a number of large recording labels and building software that placed a premium on usability (something that earlier, now-forgotten competitors had been criticized as lacking). Apple saw that free, ubiquitous, and illegal downloads *didn't actually offer a great alternative*. They could be hit-or-miss to find, were often mislabeled, and were wildly varying in quality. The software to access them was usually difficult to configure and use. And, of course, they were still illegal.

The Music Store was an instant success. By 2010, Apple had sold ten billion songs, most at 99 cents each (Apple Corporation, 2010). That's roughly ten billion dollars made selling something that any smart teenager (with a willingness to bend the rules) could grab from the Internet without paying. Drawn by a simple, consistent interface, good selection, and excellent quality control, people became iTunes customers because buying music from iTunes was a better experience than the free alternative. Sometimes, you get what you pay for.

► IT'S ALL ABOUT THE EXPERIENCE

For this reason, libraries must pay attention to what other media and information innovators are offering to our patrons when they're not at the library. Google, Facebook, Netflix, Twitter, Amazon, Apple, *The New York Times*, and others set the standard for what good, useful interactive experiences *feel* like,

not just what they offer. Every new innovation in user experience they roll out raises the library patron's expectations of what is possible—and expected.

Make no mistake: free access and compelling content are immeasurably valuable resources. But without partnering those two with engaging, easy-to-use experiences, libraries run the risk of dissatisfaction, dwindling audiences, and disuse. Fortunately, the barriers to entry for creating great software have lowered immensely in recent years and are even within the grasp of libraries with limited technical staff.

And libraries possess a number of advantages over other online sources of media and information. Our buildings and our history of face-to-face interactions give us deep, physical roots in our communities; when so much socializing happens through a glowing screen, places to meet and converse in the real world take on added value. Libraries have an open community of professional practice that encourages sharing, even between “rival” institutions. And libraries have a deserved reputation as impartial defenders of a culture of access to information for all and as an important counterbalance against excessive corporate influence or government regulation.

In the short term, it is the loyalty of our patrons that is perhaps the most important of advantages. A recent survey in the United Kingdom found that 74 percent of library users and 59 percent of nonusers considered that nation's libraries to perform an “important” or “essential” role in their communities (Sharma, 2010). That's an audience that will gladly pitch in and help us evolve with the changing media landscape. Beneath the numbers, the connection with the library goes beyond mere satisfaction and into something that looks a lot like love. Love of books, love of reading, love of learning, love of discovery—these *emotional* connections power the library of today.

However, today's loyalty is borne of the decades of previously invested good experiences delivered to an audience that had far fewer media and reading choices. For the library of the future to have as passionate an audience in decades to come, we need to ensure that we're offering interactive and discovery experiences that are as good as the offerings they are becoming used to outside the library. The 2008 U.S. election included the first voters who have never taken a breath in a world without the web. Right behind them, the so-called “Millennial Generation” and “Digital Natives” (like that two-and-a-half-year-old with her father's iPad) are much more comfortable in a media-saturated world and will demand a higher quality of tools. Those kids *are* that “next generation” for whom we need to create the perfect library.

So, what exactly *is* a next-generation library? I offer that being a next-generation library is about taking a certain attitude toward the future, one that sees in the increasing rate of technological and social change not a

threat to what we've done before but an opportunity for what we can do now. A next-generation library:

- ▶ embraces the technology that's the best tool for the job and has the nerve to stick with traditional methods where they are best;
- ▶ moves from a service model of "face-to-face" to one of "shoulder-to-shoulder" and acts as a guide, not as a gatekeeper (Underhill, 2000);
- ▶ doesn't see the digital and the physical as distinct, circumscribed modes but instead embraces them as deeply complementary and overlapping;
- ▶ listens to patrons and uses every possible communication tool to engage them in two-way conversations;
- ▶ uses technology of all kinds to improve discoverability of and access to collections as radically and broadly as possible; and
- ▶ doesn't get upset when patrons go somewhere else for information but adjusts to and learns from the new information landscape (in other words, don't fight Google or *Wikipedia*—participate in them!).

A "next-generation library," then, is not an official appellation. It's not dependent on having a huge staff. There's no qualifying test or club membership awarded, no gold plaque from a governing body you can affix to your front entrance. "Next-generation-ness" is, at core, no more or less than *an attitude toward change*.

The accelerating rate of technological and societal change can be seen as threatening or frustrating, but it instills librarians with a sense of purpose, on two fronts. First, by learning to embrace change, we can constantly reevaluate and improve our services and offerings; and second, we can offer our patrons an unbiased, guided journey through *their* relationship with this new change. Privacy, copyright, search engines, new technologies, sharing, piracy, new formats, new devices—when even the most tech-savvy among us finds it exhausting to keep up, imagine the plight of the average, not-so-tech-savvy patron trying to make sense of all of it.

It's become a bit of a cliché to say that the only thing you can be sure of is change, but the past four decades or so have made it clear that our communications and information technologies have exceeded all but the wildest science fiction. If it seems *possible* that some new digital technology Thing might be available on the Internet in a couple of years, then the smart money is on someone building a prototype, someone else making it usable, and a third someone making it ubiquitous.

Faced with such barbaric interlopers, the traditional library of popular culture (you know all the staid and old-fashioned caricatures, I'm sure) bars the door, barricades the stacks, and launches into a passionate defense of the beauty of paper. But the next-generation library, with grace, agility, and faith

in the ability of print to easily endure alongside the digital, accepts innovation as inevitable, finds the newcomers a place to sit, and puts them to work making patrons happy.

In this book, we will look at ways that modern libraries are embracing change and offer practical, hands-on tutorials to implement those changes yourself. But readers should think about their own institutions and look for ways to move beyond the installation of software and into a critique of all of the barriers preventing you from giving your patrons better experiences. It takes innovation and evolution on the legal, management, and partnership fronts as much as the financial or technical to equip your library to be comfortable with change.

Let's get started.