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Gabrielle Wiersma
University of Colorado Boulder, gabrielle.wiersma@colorado.edu

Leigh Beauchamp
ProQuest, Leigh.Beauchamp@proquest.com

Author ORCID Identifier: <http://orcid.org/0000-0002-7990-3450>

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The Time Has Come for E-Books, or Has It?

Gabrielle Wiersma, Director of Scholarly Resource Development, University of Colorado Boulder, gabrielle.wiersma@colorado.edu

Leigh Beauchamp, VP of Product Management, ProQuest, Leigh.Beauchamp@proquest.com

Abstract

For many years, librarians and industry experts predicted that electronic books would surpass print books as the format of preference. The advantages that digital books provide seemed to all but guarantee the demise of print. But something happened along the way. Numerous studies during the last decade have demonstrated that print still has a place for libraries, vendors, and most importantly, end users. So what's happened—why hasn't that time come as it has for journals? And will the "tipping point" for books ever arrive?

One explanation is that e-books have not met user expectations, but optimizing user experience when users range from students, to faculty, to librarians is a big challenge! This session included a lively discussion about the user experience with e-books from multiple perspectives. Gabrielle Wiersma from the University of Colorado Boulder shared findings from an e-book usability study with students and asked the audience to consider the reasons why people prefer one format over another. Two graduate students shared their perceptions and format preferences and answered questions from the audience. Finally, Leigh Beauchamp, vice president of Product Management at ProQuest, discussed how ProQuest is making patrons the center of Ebook Central platform development and how e-books are evolving to bring the most important elements of the print experience to digital book research.

Introduction

Studies reporting declining sales or circulation statistics along with stories about people's preference for newer, digital technology over analog formats have led to uncertainty about the future of the book (Birkerts, 2006; Coover, 1992; Kirkpatrick, 2001; NEA 2013; Pfund & Hill 2019). For many years, librarians and industry experts predicted that electronic books would surpass print books as the format of preference. The e-book market has grown over time, but e-books do not seem to have reached a "tipping point" compared to print books. During the session, we discussed the advantages of each format from multiple perspectives and explored various reasons why one format might be preferred over another.

Why Haven't E-Books Reached a Tipping Point?

From a librarian's perspective, e-books offer many advantages compared to paper books. E-books are available 24/7 with the added convenience of being accessible remotely from a home or office. E-books cannot be lost, stolen, or damaged and they do not require shelf space, which makes them less expensive to maintain than print book collections. Unlike print books, which can only be used by one person at a time, most e-books can be accessed by multiple simultaneous users, which is especially useful

for popular titles or large institutions. Both formats are portable, but reading on a computer or mobile device that serves other purposes gives e-books a slight advantage, and is particularly useful when the paper book is large or cumbersome.

Despite all of their advantages, acquiring e-books continues to pose a number of challenges for librarians. The proliferation of platforms and purchasing options has complicated the decision-making process for everyone involved in the selection to access workflow. First, libraries need to know if a book is even available as an e-book. E-books may seem ubiquitous in 2019, but they remain a smaller subset of the publishing output of many major academic publishers. The number of e-books available increases each year, but as of 2018 the number of e-books that could be acquired through our approval plan was less than half of the number of print books that were available, and only a small percentage of those books would be eligible for demand-driven acquisition programs. Publication delays are another obstacle. Publishers often release e-books after cloth or paperback formats, which means that libraries have to wait for the e-book format or they could end up purchasing materials twice. Licensing e-books presents another set of challenges. License options are not standardized across vendors, so libraries spend a great deal of time researching online availability

and understanding license terms and restrictions for various vendors. Most libraries are interested in providing access to unlimited simultaneous users without interference from digital rights management that limits functionality like printing, downloading, or other uses. This type of access often comes with a price, since e-books tend to cost 1.5 to 2 times more than paper books and that cost increases at a higher rate than for print (Daniel et al., 2019). Interlibrary loan for e-books is often prohibited in licenses or difficult to fulfill because of technical limitations, but as the composition of our collections shifts from physical/analog to online/digital formats, we need to preserve the right to share these resources with other libraries. Finally, as we invest money and effort into curating e-book collections, we need to ensure that these materials are accessible to our entire user community. Until we come together as an industry and resolve some of these issues, it is unlikely that e-books will replace or far surpass print book acquisition in most libraries.

Even if libraries prefer to acquire them, it is unclear if e-books are the preferred format for library users. The Pew Research Center (2019) reported that “print books continue to be more popular than e-books or audiobooks” based on the results of a longitudinal survey of U.S. adults. In 2019, 65% of U.S. adults said they had read a print book compared to only 25% who said they read an e-book and the percentage of people who reported they had read an e-book has declined every year since 2016.

In a similar survey of approximately 1,000 English-speaking adults, Statista (2017) reported that only 4% of respondents read e-books only compared to 28% of people who exclusively read print. The remaining responses were evenly divided between people who read both formats equally (23%) with a slight preference toward more print books (25%) than more e-books (20%). While most of these statistics reflect usage and preference for trade books, they have led to further studies about the academic and professional book market to determine how students, faculty, and researchers use books (Esposito, 2015).

Defining and Designing E-Books

During the session, we asked the audience to select a definition of e-books from a short list of options. There was no clear winner or answer, which illustrates another problem with e-books at an industry level: the lack of a shared understanding or standard definition of e-books. The term e-book is deceptive

because we think we know what it means, but we also use this term to describe everything from the content itself to the application, hardware, or platform (Henke, 2001; Kudler, 2015). These, however, are all separate components and if one is poorly designed, then it will likely affect the usability or end user experience.

Definitions of e-books range from online versions of paper books to a new edition of a work. E-books are often compared to paper books and assumed to be an online version of a print book. Many of the features that appear in e-book platforms and reading devices have been adapted from paper books. The concept of designing e-books based on print is grounded in the theory that most people want them to be packaged using the book metaphor and include familiar elements such as tables of contents, indexes, and page numbers (Henke, 2001). Even some of the earliest examples of e-books, like IBM’s BookManager (1987), included these elements as well as the ability to create bookshelves and annotations. In the late 1990s developers started to add features like the ability to turn a page and a progress indicator to depict how many pages were left to read (*ibid.*). More recently, we have been introduced to technology like Amazon’s paperwhite pages that are not just trying to mimic paper books but are genuinely trying to replicate paper itself (Moynihan, 2014).

Arguably, “the paper book has been developed over hundreds of years and as such is the product of extensive usability testing” (Henke, 2001, p. 36). As such, it makes sense to design e-books that incorporate the best features of paper. Including familiar elements and navigational tools makes it easier for people to use and adopt e-books as a new format because it scaffolds upon their existing knowledge about how print books work (*ibid.*). However, it also creates expectations that e-books will look and work like paper books and so people are disappointed when they do not.

While many e-books are simply digital replicas of their print counterparts, their underlying structure can fundamentally change their appearance and functionality. Many e-books use different fonts and formatting to accommodate Web-publishing standards. Some include additional content ranging from hyperlinks to supplemental keywords or abstracts. The search algorithms, OCR (optical character recognition) quality, and markup language (e.g., HTML or EPUB) can also affect how the content is displayed and what can be searched. A comparative analysis

of publisher and aggregator platforms demonstrated that the same title could have different descriptive metadata and yield a different number and order of search results depending on the platform used (Tovstadi & Wiersma, 2015; Wiersma & Tovstadi, 2017). In addition, the study found that important elements of the book metaphor, such as page numbers and tables of contents, were often missing or inaccurate. All of these inconsistencies affect the user experience and may influence people's overall preference for one format or platform over another.

Usability Testing and Optimizing the User Experience

It is important for libraries to understand how e-books may vary by platform and factor usability into their selection criteria. Libraries should request trial access to test new e-book platforms and periodically review e-book platforms that are part of their collection. Testing could range from spot-checking descriptive metadata and navigation tools to attempting to accomplish the same task in a different format (e.g., e-book or paper) or platform. At the University of Colorado Boulder, librarians have completed usability testing with students to identify features that they want to use and functionality that they expect to have in e-books (Tingle, Wiersma, & Tovstadi, 2018; Tovstadi, Tingle, & Wiersma, 2018; Tovstadi, Wiersma, & Tingle, 2017). We tested tasks that were important to the user experience, such as how to open and start reading the book from a landing page, navigating to a specific page or chapter, creating notes or highlighting text, printing and downloading, and searching for key words within the book, and we documented how much time and effort it took to accomplish each task. We observed students complete a series of tasks on the publisher platform and two aggregator platforms to determine if students had a preference about platforms as well as general feedback.

Students at CU Boulder preferred platforms with simple, clean layouts, intuitive icons, and elements of the book metaphor like linked tables of contents, indexes, and page numbers. The platforms that provide an online reader that mimics the layout and navigation (e.g., page flipping) of paper books were often easier for students to use compared to platforms that disaggregate a book into separate PDF files for each chapter. Students also applied their knowledge of how other websites work to e-books and expected that blue text would always be hyperlinked (it was not), that search terms would be

highlighted, and that keyboard and mouse shortcuts to change the zoom, search or find a keyword, print, save, or download would apply. Unfortunately, this functionality really varies based on the browser being used and many e-book platforms are not designed to respond to these commands.

User Engagement

Most publishers and vendors are receptive to feedback and suggestions about how to improve the usability of their products. Some have dedicated user experience teams and some actively solicit feedback from librarians and end users like students and faculty. For the Lively Discussion ProQuest recruited two students to participate as panelists and share their perceptions and format preferences. Each student was recruited because of her strong preference for one format over another, but they seemed to agree that both formats remain useful. Cost was important to the students and might drive a decision to use print vs. electronic. One student was persuaded to use e-books that were required textbooks or reading. She was further convinced of the convenience of e-books while studying abroad. The other student had used e-books, but given the choice would opt to use a paper book. The convenience of having instant access and not having to carry print books around were key reasons supporting a preference for e-books. One of the students preferred print for lengthy, end-to-end reading, but both students mentioned discoverability and the ability to full-text search and go directly to the portion of the book was of interest. They also suggested that we consult with younger people because students in their age group grew up reading both formats, but younger generations may have different perspectives.

The students answered questions from the audience ranging from concerns about privacy to long-term ownership. We asked the students if they were concerned about a loss of privacy through having to create accounts such as Adobe Digital Editions. Interestingly, the students had no concerns regarding privacy, commenting that most of their personal information already exists somewhere online or on social media. We also asked if they ever used Sci-Hub or Research Gate for titles they have access to. Neither of the students had ever heard of Sci-Hub or ResearchGate and were not using it. A couple of publishers in the room were surprised—and relieved—to hear that! Both students indicated that they use their laptops for reading, vs. mobile or a tablet. This is consistent with usage data from ProQuest Ebook Central

Figure 1. “EBooks: A Recipe for Success.” Poster at the 2019 Charleston Library Conference.

where only 19% of uses are from a mobile or tablet, although this has grown by 11% in the last year.

During the conference, the presenters displayed a poster in the lobby of the Gaillard Center and invited people to leave feedback about e-books. The poster was titled “EBooks: A Recipe for Success” and it included sticky notes for people to leave suggestions as “ingredients for optimal eBook experience” (see Figure 1). We estimate that 50 people participated by adding a sticky note and many more people observed and interacted with the poster during the conference.

The comments suggest that further improvements are needed to support accessibility, reducing or removing digital rights management including limits on the number of simultaneous users, and simplifying the options for purchasing. Many of the comments about usability support the concept of designing e-books that work like paper books. A few people wanted page numbers, annotation features, and customization options while others simply wanted e-books to “look exactly like print books.” The term “consistency” was mentioned numerous times and was used to describe something that is not available in the design across platforms and yet

is highly important to the user experience. All of the comments were recorded and organized into themes that can be found in Appendix A. The poster was another example of how librarians and vendors can ask for feedback and suggestions from end users and illustrates some of the issues that we need to work on together in order to improve e-books for everyone.

Personas and Product Development

ProQuest is committed to understanding book user format preferences and designing new platform functionality and products to meet patron needs. ProQuest thoughtfully considers the end user when developing, making sure that patron feedback is solicited and utilized when building new features. One difficulty, as highlighted by our student panel during the Lively Discussion, is that all patrons do not have the same needs and preferences.

In order to help us consider the many different types of patrons, the ProQuest product and user experience teams have identified a number of different “user personas.” These personas capture our most common users, from the “Guided Researcher,” the student whose goal is to successfully complete an

assignment from an instructor, to the “Established Scholar,” whose task is to contribute new research to their field. We also have a commitment to build “Accessibility First” into our platform and products, facilitating access to our products to users with special needs.

When polled, 88% of librarians in the room agreed that patrons should have a direct role in driving product improvements. Interestingly, only 43% of librarians polled during the session were moderately to fully supportive when asked, “How do you feel about ProQuest Product Development interacting directly with your patrons?” When we dug a little deeper, the main concerns from librarians in the room were around sales activity directed to students and faculty, rather than product development activity. There was significant support during the session for including

librarians in the recruitment of end users to provide feedback on product development.

Conclusion

E-books may not have replaced paper books, but they continue to be an important component of many libraries’ collection development strategy. Increased availability, more transparent and standardized purchasing models, and interfaces that optimize the end user experience are key factors in improving the adoption rate for e-books that might lead to a “tipping point” in sales or usage. Librarians, vendors, and publishers each play an important role in developing products, and it is critical that we continue to solicit feedback from a variety of perspectives or personas in order to design resources that meet user needs and expectations.

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Appendix A: E-Books: A Recipe for Success Poster Responses

Usability

- An interface that makes our users not shy away from using them.
- Ditto page numbers which correspond to print.
- Ebooks would look exactly like print books. Feel like it. Turn pages like it, etc.
- Text mining.
- I always know what (print) page I'm on.
- I can keep it, along with my annotations, in the reference management system of my choice.
- Page numbers that correspond to the print.
- Patron convenience.
- CTRL + F, CTPL + P, CTRL + C: All should translate!
- Personalized and customized.
- Make all the platform (Ebsco, PQ, JSTORE) look the same! Consistency for patron!
- I can move easily between devices, including e-readers, and will keep my place and my annotations.
- The closer to the good things about print—notes, tabs, easy page flipping, jump from ch to chi easily—the better.
- Ability to annotate.
- Interoperability across platforms.
- Consistent platform design and UX.
- No client user instruction required.
- Adding comments that are easy to keep and track/review.
- Multifunctional include a noted version abridged version full version in the same e-book.
- Consistently applied digital rights and options, not title-by-title.
- Interactive embedded links.

Workflow

- Good, consistent metadata.
- Consistent metadata and tools to compare usage by subject.
- A platform that supports ALL my collections.
- Collection management without costs.

DRM

- No download/print limits.
- DRM free—YES!!!
- User Privacy + DRM Free Access.
- Stop embargoing “textbook” content.
- No limits on printing pages/chapters.
- DRM Free!
- No publisher embargo on e-content.
- Chapter downloads without limits (i.e., researcher needs!)
- Copy left.

Accessibility

- Accessibility for visually impaired.
- No required registration/log-in.
- Simple Accessibility (no complex screen reader, D/deaf aware).
- WCAG AAA!
- Unlimited users.
- No extra software necessary.
- Scanned/inaccessible PDF.
- More titles w/multiple or unlimited users
- Unlimited number of users.
- Unlimited users.
- OCR'd searchable text.
- High-quality, downloadable graphic content.
- Accessibility (508 ADA).

Cost

- No complicated purchase model and no contingent on-going spending obligations.
- FAIR prices!
- Varied pricing options (e.g., individual, pkgs, etc.)
- Expensive print books.
- Cost—same (not higher) than print books.

Miscellaneous

- Gasoline.

- Book of Matches.
- E-textbooks.
- Enlightenment.
- Can't lose it.
- Stop defining too many types as textbooks. Many are more professional desk references for grad students. Libraries need this.
- Preserve.