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## E-Books in Academic Libraries

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Published by Purdue University Press

Ward, Suzanne M, et al.

E-Books in Academic Libraries: Stepping up to the Challenge.

Purdue University Press, 2015.

Project MUSE.[muse.jhu.edu/book/43208](https://muse.jhu.edu/book/43208).



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# 20 | Mobile Access to Academic E-Book Content: A Ryerson Investigation

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## **ABSTRACT**

In 2014, the authors conducted two series of tests using four different mobile devices to ascertain how well the e-book collections at Ryerson University met their users' mobile information needs. They developed criteria based on factors such as ease of access, online viewing, offline reading, download icon, and necessity of using special apps. Then they scored each of 25 e-book collections and, based on the total scores, grouped the collections into three categories (high, medium, low). Most collections scored five (out of 10) or higher. The authors passed on feedback for the lowest scoring e-book collections to the vendors and urge other librarians to do the same.

## **INTRODUCTION**

Ryerson University is an urban commuter campus in the heart of downtown Toronto, Canada's largest city, with a population of approximately 30,000 full-time students as well as a very large continuing education contingent. Library collections include approximately 500,000 e-books, 500,000 print volumes, and 80,000 e-journals and other online resources, as well as subscriptions to almost 400 databases. E-book use reports show that Ryerson University Library e-book collections are well used. These reports, together with the global increase in mobile devices—"more smartphones purchased than PCs in the United States" (Mobile Future, 2011)—motivated the electronic resources staff at Ryerson Library to

determine how effectively the e-book collections met their users' mobile information needs. In fall 2013, a project team consisting of an electronic resources librarian and an electronic resources technician set out to investigate mobile access to Ryerson e-book collections. In January 2014, the project team completed the first phase of testing using a first-generation iPad and a Samsung Galaxy Note 2, and presented the results as a poster at the Ontario Library Association Super Conference. The project team completed a second phase of testing in July 2014, this time using an iPad Mini and an iPhone 4S.

## **BACKGROUND**

Wilson and McCarthy's (2010) article, "The Mobile University: From the Library to the Campus," predicted that by 2013 Ryerson student mobile device use could reach as high as 80% (p. 214). Moreover, with regards to the status of mobile access to e-books described, Wilson and McCarthy lamented that "the provision of mobile versions of eBooks represents a large challenge to academic libraries" (p. 224).

Ryerson library directs e-mails reporting problems accessing electronic resources to [erm@ryerson.ca](mailto:erm@ryerson.ca), a mailbox monitored by the electronic resources technician with backup from electronic resources librarians. From 2010 through 2013, this mailbox received an average of approximately 600 queries annually. Although the library had not received many questions from students, faculty, and staff about accessing e-book content on mobile devices, the authors certainly fielded challenging questions on this topic from time to time. One incident in particular was a catalyst for this project. In August 2013, an engineering faculty member, attempting to view Safari e-books on his iPad, contacted [erm@ryerson.ca](mailto:erm@ryerson.ca). He indicated he was being asked for an organizational ID and wondered what it was so that he could access content. After many e-mails back and forth with Safari's technical support team and many weeks of follow up, the authors finally learned that, instead of an organizational ID, a personal account was required to download content for offline viewing in the Safari To Go app that is available for both IOS and Android devices. After passing this information along to the faculty member nearly seven weeks after his initial query, the authors resolved to become more proactive when dealing with requirements for mobile access to e-books and offline viewing.

The January 2014 call to propose a poster session for the Ontario Library Association Super Conference offered a good opportunity for the authors to start mobile e-book testing. After their poster proposal was accepted, the project team set to work with the following four objectives:

- test mobile access to Ryerson library e-book collections using different devices;
- evaluate the ease with which a user can access e-book content for online viewing, offline reading, and downloading using a set of criteria;
- rank e-book platforms on a scale of 0–10 based on performance on each device; and
- group results into an overall measure based on each platform’s score.

## PHASE 1

### Methodology

The project team employed the following methodology:

*Step 1.* Compiled a list of the 25 largest and most popular e-book collections and platforms from 60 available collections.

*Step 2.* Decided to test two devices in the first phase of testing. (Originally the team intended to test access on up to five different devices: Android, Apple iPhone, iPad, Kobo, and Kindle; however, due to time constraints and the limited availability of devices, the authors limited the study to two devices.):

- Samsung Galaxy Note 2 Android Jelly Bean 4.3
- Apple iPad iOS 5.1.1

*Step 3.* Selected the following criteria (see Table 1 footnotes for scoring criteria for each category):

- Is there an option to download for offline reading?
- Does the user have to create an account to access or work with content?
- Maximum range of content users are allowed to download (whole book, one chapter, range of pages)?
- How easy is it to locate the icon to download content?
- Does the user have to download a special app to view content?

- How does the overall user experience on each device rate (including, for example, online viewing experience, how many steps were involved to access content, etc.)?

*Step 4.* Assigned a score of 1–10 to each e-book collection based on the above criteria. Scores for subjective user experience for each device were largely dependent on whether downloading was available. The authors presumed that a user would find it useful to be able to access content offline without using a mobile data plan; therefore, a score of “0” was automatically given to those platforms that did not allow downloading. Each author used one of the devices to test all the collections, and each author worked independently of the other.

*Step 5.* Ranked each e-book collection into one of three categories: 8–10 (high); 5–7 (medium); 0–4 (low).

## Findings

Using the criteria described above, the team evaluated 25 e-book collections on two mobile devices: a Samsung Galaxy Note 2 and an Apple iPad. Ten collections (40%) scored at least 8 points and received a ranking of “high” (see Table 1). Nine collections (36%) scored between 5 and 7 points and were assigned a ranking of “medium.” Only six collections (24%) scored between 0 and 4 points, and these were ranked “low.” A total of 19 out of 25 collections scored at least a 5 or higher, meaning that 76% of Ryerson e-book collections scored either at a “medium” or “high” in terms of mobile access to their content. Only 24% performed below this level.

Overall, the authors were pleasantly surprised by the general accessibility of e-book content in Ryerson Library e-book collections on the Samsung Galaxy and the Apple iPad. For the most part, e-book collections were easily accessible for online viewing and did not require additional steps that can restrict access to content and frustrate users (for example, the need to download a special app to view content, or to create an account to view content, or to enter special identifiers such as access codes). They did, however, encounter some challenges with mobile access to library e-book collections, including the following:

- Online viewing of content sometimes required manual resizing of text before it displayed properly or in full on the smaller of the two devices, the Android Samsung Galaxy Note 2.

- Download speed experiences sometimes varied greatly between the Samsung Galaxy and the iPad. This was likely due in part to the differences in the age and operating systems of the two devices.
- A handful of platforms had barriers such as the need for access codes, personal accounts, installation of readers or apps, and so forth, or other limitations such as having to switch to the full site to view content or being unable to view content on the mobile site.
- Although automatically redirecting to the mobile site may enhance online user experience, in some cases the mobile site makes it harder to download. For example, on one of the platforms, the option of unchecking “Preview Only” disappears when using the smaller-screened Samsung Galaxy Note 2. Consequently, users are unaware that in these cases they are not searching the full text access.

The team decided to contact the vendors of the platforms that scored on the lower end and share suggestions for enhancing access to their content on mobile devices.

## **PHASE 2**

At this point, the team determined that future work in this area should include retesting on a smaller-screened mobile device such as an iPhone. This was partially based on Julie Shen’s (2011) observations in 2011, “a recent usability test showed that, although most e-books in Cal Poly Pomona’s current collection were next to unreadable on smaller mobile devices such as the iPad Touch, all of our titles worked well on larger mobile devices such as Apple iPad” (p. 187).

### **Methodology**

Based on the findings from the first phase of testing in January 2014, the project team introduced a second phase that would incorporate retesting the same e-book collections on two additional devices. Notably, one of these devices was smaller-screened than the mobile devices used in the first phase of testing. The authors conducted the second phase in July 2014 on the following two devices:

- iPhone 4S iOS 7.1.2i
- iPad mini iOS 6.1.3

The team used methodology similar to the first phase of testing, but they made a few small changes to the spreadsheet criteria (see Tables 1 and 2 footnotes for scoring criteria for each category):



Knovel library	1	2	1	1	1	1	1	1	1	1	1	● 8
Latino Literature	0	0	0	0	0	0	0	0	0	0	0	○ 1
LWW/Ovid E-books (Books @Ovid)	1	2	0	0	0	0	0	0	0	0	0	● 5
MyiLibrary	2	2	1	1	1	1	1	0	0	0	0	● 7
NetLibrary Collection 1 (EBSCO)	1	2	0	1	1	0	0	0	0	0	0	○ 4
North American Indian drama	1	2	1	1	0	1	1	1	1	1	1	● 7
OECD iLibrary (formerly SourceOECD)	1	2	1	1	1	1	1	1	1	1	1	● 8
PsycBOOKS (on ProQuest Platform )	1	2	1	1	1	1	1	0	0	0	0	● 7
Safari Tech Books Online	1	1	0	0	0	0	0	0	0	0	0	○ 2
Scholars Portal Books	1	2	1	1	1	1	1	1	1	1	1	● 8
Springer	1	2	1	1	1	1	1	0	0	0	0	● 6
Synthesis Digital Library(Morgan/Claypool)	1	2	2	1	1	1	1	1	1	1	1	● 9
University Press Scholarship Online	1	2	1	1	0	1	1	0	0	0	1	● 6

<sup>1</sup>No Download = 0; PDF = 1; PDF + EPUB = 2; <sup>2</sup>No = 2; Yes = 1; No Download = 0; <sup>3</sup>Whole book = 2; Chapter = 1; Smaller than Chapter or no download = 0; <sup>4</sup>icon/Link = 1; Without or No Download = 0; <sup>5</sup>Including Bluefire but exclude PDF Reader; <sup>6</sup>No = 1; Yes or No Download = 0; <sup>7</sup>1 = Pass; 0 = Fail; <sup>8</sup>1 = Pass; 0 = Fail



- Modified the download scoring criteria (Footnotes 1 and 9 on Table 1 and Table 2) from pdf = 1 to pdf or other = 1
- Modified the maximum download scoring criteria (Footnotes 3 and 11 on Table 1 and Table 2) from “chapter” = 1 to “chapter or 10+ pages” = 1

In addition, during the second phase of testing, the authors resolved to reach consensus about the ratings by conducting the testing together, thereby increasing the interrater agreement. Like the first phase, each author was responsible for testing one of the devices; however, during Phase 2 they discussed the mobile experience before giving the ratings for the user experience. One of the platforms, Cambridge Collection Online, had to be dropped out of the testing for Phase 2, since the library had cancelled the subscription in mid-2014. Table 2 shows the results of Phase 2 testing.

## Findings

Overall, the authors found that the platforms scored better in this phase of testing. Only four platforms were assigned to the ranking of “low,” and that was because none of them allowed downloading of content. Only six collections fell in the mid-range score. The number of platforms that scored in the “high” zone increased from 10 to 15 (63%), with five platforms (21%) achieving a high score of 9 out of 10. Although there were two platforms (8%) that scored significantly worse in the second phase with smaller-screened devices, the team saw more improvements overall in the performance of the e-book collections. The most dramatic improvement was the American Council of Learned Societies (ACLS) Humanities E-Books (HEB). During Phase 1, HEB received a score of 1 out of 10 (low) mainly because of the limitation of downloading only three pages at a time. During the second phase of testing, the maximum range that could be downloaded had increased to 10 pages; as a result, both authors agreed that the user experience had improved significantly.

## FURTHER INVESTIGATION

The team also observed some differences between Phase 1 and Phase 2 that prompted further investigation. For instance, in the second phase, both authors had difficulty reading books offline through the Safari To Go, the app from Safari Tech Books Online that sparked this project. The team wondered if the vendor changed the policy during the six-month period

between the two tests, or if the “Offline Bookbag,” the folder in which offline readings should be placed, had not been available earlier. After following up with the vendor, the authors found out that this feature is not available for Safari’s Academic or Library account.

Another difference in Phase 2 occurred with NetLibrary Collection 1 from EBSCO. This collection scored poorly during the first phase of testing because it only allowed downloading one page at a time. When the team tested the same titles in the second test, both iPhone and iPad mini provided options to “Download (Offline).” This option was not visible when using a desktop, so the authors will have to conduct further testing to see if it is available on an Android or other tablet.

## **CONCLUSION**

In summary, the majority of Ryerson Library’s e-book collections tested for mobile access usability received favorable scores. During the first phase of testing on an iPad and a Note 2 (January 2014), a total of 19 out of 25 collections scored at least a 5 or higher, meaning that 76% of the e-book collections scored either at the 5–7 (medium) or the 8–10 (high) range. During the second phase of testing on an iPad mini and an iPhone (July 2014), six collections fell in the mid-range score, while the number of platforms that scored in the “high” zone increased from 10 to 14, meaning that 20 out of 24 collections (83%) scored at least a 5 or higher, an increase from 76% in Phase 1. Table 3 compares the scores between the two tests.

It is indeed an accurate proclamation that “the challenges and opportunities presented to libraries, librarians, and library users by the mobile revolution are massive, exciting, and sometimes daunting” (Bell & Peters, 2013, p. ix). Librarians have an important role to play in ensuring that vendors receive feedback to encourage improving mobile access to their resources. The authors passed along feedback for the lowest scoring e-book collections and received varying responses from most of the vendors; however, only one provider indicated that they would take any action based on the feedback. Vendors would be wise to place priority on improving access to their content through mobile devices. As Brynko (2013) reports in “What’s Trending in Ebooks,” a Library Resource Guide study found that “the greatest demand in libraries will be delivering ebooks to mobile devices, whether those are iPads, tablets, or smartphones” (p. 34). In conclusion, sustained



LWW/Ovid E-books (Books @Ovid)	1	2	1	1	1	1	1	1	1	1	1	● 8
MyiLibrary <sup>17</sup>	2	2	1	1	1	1	1	1	1	1	1	● 9
NetLibrary Collection 1 (EBSCO)	1	1	2	1	1	0	1	1	1	1	1	● 7
North American Indian drama	0	0	0	0	0	0	0	0	0	0	0	○ 0
OECD iLibrary (formerly SourceOECD)	1	2	1	1	1	1	1	1	1	1	1	● 8
PsycBOOKS (on ProQuest Platform )	1	2	1	1	1	1	1	1	1	1	1	● 8
Safari Tech Books Online	0	0	0	0	0	0	0	0	0	0	0	○ 0
Scholars Portal Books	1	2	1	1	1	1	1	1	1	1	1	● 8
Springer	1	2	2	1	1	1	1	1	1	1	1	● 9
Synthesis Digital Library (Morgan/Claypool)	1	2	2	1	1	1	1	1	1	1	1	● 9
University Press Scholarship Online	1	2	1	0	1	1	0	1	1	0	0	● 5

<sup>9</sup>(No Download = 0; PDF or HTML = 1; PDF + EPUB = 2); <sup>10</sup>(No = 2; Yes = 1; No Download = 0); <sup>11</sup>(Whole book = 2; Chapter or 10 pages = 1; Smaller than 10 pages or no download = 0); <sup>12</sup>(Icon/Link = 1; Without or No Download = 0); <sup>13</sup>(including Bluefire but exclude PDF Reader); <sup>14</sup>(No = 1; Yes or No Download = 0); <sup>15</sup>(1 = Pass; 0 = Fail); <sup>16</sup>(1 = Pass; 0 = Fail); <sup>17</sup>The maximum number of pages varies for MyiLibrary and Scholars Portal. The authors thus decide to score this option as “1,” as it seems to be the norm for most of the books

**Table 3.** Comparison of scores from Phase 1 and Phase 2.

Name of the package	Score for Phase 1	Score for Phase 2	Phase 2 minus Phase 1
18th Century Collections Online (ECCO)	● 8	● 9	→ 1
19th Century Collections Online (NCCO)	○ 7	○ 7	→ 0
ACLS Humanities e-books (HEB)	○ 1	● 8	↑ 7
Adam Matthew Collection (5 collections)	● 9	● 9	→ 0
Cambridge Collection Online	● 8	N/A	N/A
Classical Scores Library	○ 5	○ 5	→ 0
Cognet	● 8	● 8	→ 0
CRCnetBase	○ 4	● 8	↑ 4
EBL	○ 7	● 9	→ 2
ebrary	● 8	● 8	→ 0
IEEE / Wiley e-books	● 8	● 8	→ 0
IntelLex Past Masters via Gibson LC	○ 1	○ 0	→ -1
Knovel library	● 8	● 8	→ 0
Latino Literature	○ 1	○ 0	→ -1
LWW/Ovid E-books (Books @Ovid)	○ 5	● 8	↑ 3
MyiLibrary	○ 7	○ 7	→ 0
NetLibrary Collection 1 (EBSCO)	○ 4	○ 7	↑ 3
North American Indian drama	○ 7	○ 0	↓ -7
OECD iLibrary (formerly SourceOECD)	● 8	● 8	→ 0
PsycBOOKS (on ProQuest Platform )	○ 7	● 8	→ 1
Safari Tech Books Online	○ 2	○ 0	→ -2
Scholars Portal Books	● 8	○ 7	→ -1
Springer	○ 6	● 9	↑ 3
Synthesis Digital Library (Morgan/Claypool)	● 9	● 9	→ 0
University Press Scholarship Online	○ 6	○ 5	→ -1

focus on the mobile user experience both at the library level and the resource provider level should be a priority so that libraries can seamlessly deliver content to users no matter what devices they use.

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