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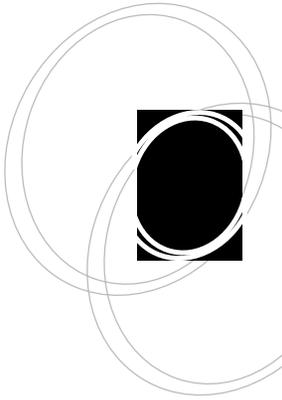
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McGill Library Makes E-books Portable: E-reader Loan Service in a Canadian Academic Library

Maria Savova and Matthew Garsia

abstract: E-readers are increasingly popular personal devices, but can they be effectively used for the needs of academic libraries' clients? This paper employs an evidence-based approach that examines the role and efficacy of implementing an E-reader Loan Service at McGill University Library. Suggestions are offered as to what lending model and device features best meet client needs. Observations are made based on the lessons learned from active use. The paper also examines relevant issues, such as electronic formats, Digital Rights Management, and the role of e-readers as library technology that facilitates the ideals of mobile learning.

Introduction

The image of the library as a kind of archaic, vaguely arcane repository of knowledge divorced from the real information needs of the modern (and busy) user is a false notion, which is, thankfully, being dispelled. The library, contrary to popular belief, is, and has always been, the arena of the new. Inventive approaches to the codification of knowledge have led to the protection and preservation of that knowledge. The gathering together and organization of knowledge for the purpose of safeguarding it and ensuring access is the very spirit of librarianship. In order to manifest this ideal in a practicable fashion, libraries have embraced whatever means, methods, and technologies best enable knowledge to be codified, preserved, and of course, transmitted. We sometimes forget that the most ubiquitous of items, the common book, is a technologically generated means of storing and accessing content.

Viewed in this fashion, it becomes clear that libraries are very much concerned with technologies; however, librarians must always exercise careful and reasoned judgement,

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embracing promising technologies, while resisting those offering only an ephemeral utility that will quickly pass into obsolescence. Practical and logistical considerations must always be considered when approaching a new library technology. As already suggested, libraries have, and will continue to be, deeply engaged in acquiring and using resources that aid in better delivery of services and general bibliographic aims. It is, after all, in the crucible of practical usage that the value of new technologies is truly put to the test. One must constantly ask what benefit and utility is gained. The answer, of course, depends upon the library and the needs of its clients.

As libraries strive to fill the virtual stacks of their electronic collections with e-books and other forms of digital content, they face a unique set of challenges and obstacles relating to the delivery and access of this content. It is not enough simply to build and cultivate a collection; one must also provide the means for it to be used. The provision of access necessitates the availability of a means of access.

Within the context of modern academic libraries, one of the more promising means of accessing electronic content on the go is through e-readers: portable devices capable of

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displaying a range of content, most notably e-books. Unlike Netbooks, electronic tablets, and other portable devices designed to mimic, in various degrees, the function of a computer, an e-reader, more or less, attempts to mimic the function of a book. E-readers

provide a range of functionalities, and each simulates, with varying degrees of verisimilitude, the traditional experience of reading print-based materials.

From an academic library perspective, e-readers are evaluated as content delivery systems and as tools that facilitate the pedagogical ideals of mobile learning. This article examines pertinent issues, such as e-book formats, digital rights management (DRM), implementation issues, ongoing challenges, and future objectives. By highlighting the successful implementation of an E-reader Loan Service at a major Canadian university library, the authors hope to elucidate some of the possibilities such services can offer academic libraries, and most important, their users. The present discussion will make clear that e-reader loan services can be successfully integrated into the broader spectrum of services (electronic, print, and otherwise) enabling libraries to meet the information needs of those they are designed to serve.

Literature Review

Many electronic resources, most notably scholarly e-journals, have enjoyed a great measure of popularity within academia. The shift in focus toward an electronic format has led many libraries to discontinue print subscriptions altogether. Yet despite the success of electronic resources in general, e-books, which have been on the market since the 1990's, have seen limited adoption among student populations and, as Robert Slater has opined, have "yet to assume a significant place in academic library collections."¹



An examination of the literature points to several reasons for the slow adoption and usage of e-books, among them are two recurring sets of problems that are of particular interest to the present discussion.

The first area of difficulty is generally physiological in nature and relates to issues associated with the means by which e-books are accessed. E-books, being digital analogues of their print equivalents, tend to require longer, extended periods of time spent reading from a computer screen. A study conducted in the Archbishop Alter Library identified eyestrain from prolonged periods of reading from a computer screen as one of the principal complaints against e-books.² Another study noted a preference for printed books when engaged in “extended reading,” which again suggests physiological discomforts associated with the means of access.³ These kinds of physical complaints are common across the literature and point to problems between content (e-books) and the means of accessing that content (typically computer screens).

The second general area of criticism against e-books relates to issues of mobility. Most e-books provided by academic libraries are accessed via desktop or laptop computers, and while handheld electronic devices, such as smart phones, may be capable of displaying text, they do not generally do so in a way that sufficiently emulates the look, feel, and convenience of printed books. Thus, lack of portability is considered to be one of the main reasons for the lukewarm reception of e-books in general. In the same study, by Noorhidawati Abdullah and Forbes Gibb, college students observed that “e-books are not as portable as printed books.”⁴ Similarly, Ebrary’s 2007 survey found that e-books are judged to be inferior to print books due to their lack of portability and ease of use.⁵

This points to the conclusion that students are very much concerned with mobile access, ease of use, and overall convenience. While it cannot be denied that e-books have seen limited adoption, this does not necessarily indicate that students have an inherent dislike for the e-book itself, but rather for the way in which it is accessed. Put simply, it is not the format, but the means of access that is the problem.

Fortunately, these problems have been addressed, in the form of the technology used in e-book readers, such as electronic paper, which, according to a report by Chantal Gorissen, “reflects light like ordinary paper,” thus making reading from an e-reader more comfortable on the eyes.⁶ These devices also offer an answer to the portability issues relating to e-books. Even with such developments, however, is it worthwhile for libraries to bother with e-readers? Are they a “passing fad” or something of more enduring value worth considering?⁷ For many libraries, the answer seems to be *yes*. As Daniel Freeman stated on the ALA TechSource Blogger Forum “[a]nything with the potential to transform reading has the potential to transform librarianship” and hopefully can provide libraries with much needed “new ways to house and circulate material.”⁸

In recent years, many public and academic libraries have embraced the idea of lending dedicated reading devices, generally dubbed ‘e-readers.’

In recent years, many public and academic libraries have embraced the idea of lending dedicated reading devices, generally dubbed ‘e-readers.’ Martin Zimmerman, and Mari Aaltonen et al, both describe a wide variety of such services offered by libraries.⁹



The most popularly tested devices are the Kindle (Sparta Public Library, Vanderbilt University Library, Texas A&M University Libraries, West Vancouver Library, University of Washington, Syracuse University, etc.) and the Sony Reader (Penn State University Library, North Carolina State University, Open University and Cranfield University in UK, Memorial University Libraries in Newfoundland, etc.).¹⁰ Selecting a device, however, is only the first step. Once this is done, the library needs to decide upon the best way to utilize it in order to provide service and to access collections.

The details and outcomes of these services vary from library to library; however, they almost exclusively focus on preloading content. This approach treats the e-readers as a means of lending electronic content and sets boundaries to what library users may or may not access. While pre-loading is by far the most widely adopted model for the provision of e-reader loan services, some have called its viability into question. In her study on Penn State University Library's Sony Reader lending service, Anne Behler questions the value of preloading, asking "[w]hy monopolize many books at once when the patron only wants one?"¹¹ Still, despite some doubts being raised, the preloading model continues to dominate. Many libraries view it as the only reasonable option, while others have embraced it as a valued tool. In a pilot test of two different Sony Reader models conducted by four librarians in the Lloyd Sealy Library, the preloading of content was considered an "administrative advantage," as it provided tighter control on what was loaded and accessible on the e-reader.¹²

Why e-readers?

At McGill Library, e-readers, and by extension E-reader Loan Service, have been identified as a promising and worthwhile way of meeting the information needs of clients, many

The ability to facilitate the use of learning materials on the go, regardless of location, is a tremendous convenience and a growing necessity.

of whom wish to access the wealth of the Library's e-content on the go.¹³ Expanding upon the principle of maximizing user access, McGill Library is trying to go one step beyond, empowering its tech-savvy clients with the ability to utilize library features, particularly electronic content, independently of

proximity to a computer and Internet connection. The ability to facilitate the use of learning materials on the go, regardless of location, is a tremendous convenience and a growing necessity.

Since its inception, the electronic content at McGill Library has shown increasingly heavy use and LibQUAL+ surveys have demonstrated that clients want, and indeed rightfully demand, an increased and broader range of e-content.¹⁴ Important for librarians, these surveys have also shown, not surprisingly, an increased desire for convenient access to library materials. Convenience can, of course, mean many things, but first and foremost, it means the ability to get what you want, when you want it, the way you want it. The modern user wants their library to come with them, and why not?

The success of services like OverDrive provides additional evidence that library users today prefer to be able to take the electronic content on the go, rather than be



chained to a computer and Internet connection.¹⁵ This freedom can be achieved through the combination of availability of downloadable content and a portable device that is capable of displaying it. Before e-readers, the users' options were either to read e-books on a computer screen or print them; now there is an alternative. E-readers are seen as facilitators in the adoption of e-reading and e-learning; a convenient way to bridge the divide between the print and the electronic book.

For an academic library, the potential of e-readers lies, at least in part, in their ability to help facilitate the ideal of mobile learning, which can best be understood as "portable pedagogy," or "outside of the classroom...anywhere, anytime learning," where technology is also involved.¹⁶ Mobile learning is an idea that can be packaged in different ways, or under different titles, but the underlying principle, in all of its elegant simplicity, remains the same: to meet learning objectives in ways that transcend geographical limitations and to pursue the use of technologies that best facilitate this aim. By providing both the electronic content that supports the teaching, learning, and research objectives of faculty and students, and the mobile technology that facilitates the use of this content on the go, the Library promotes mobile learning within the institution it serves.

Last, but not least, the presence (and use) of new technology promotes technological literacy and affirms the Library's position as a place of learning innovation. The way certain knowledge is acquired is as important as the essence of the knowledge itself, and serves as an additional pedagogical element in the teaching process.¹⁷ E-readers, while increasingly popular in USA, are still relatively new in Canada.¹⁸ At the beginning of 2010, when McGill Library first implemented E-reader Loan Service, for many clients, borrowing a device from the Library was their first encounter with this technology.

Before e-readers, the users' options were either to read e-books on a computer screen or print them; now there is an alternative.

E-reader Loan Service at McGill: Sony Reader PRS-600 lending

Like many others, McGill University Library conducted its own project, and integrated e-readers as a valuable library technology that promotes and facilitates mobile learning by providing clients with a new tool to complement the existing library services. Unlike most other libraries, however, McGill embraced a conceptually different model.

McGill Library does not subscribe to the idea of preloading content. Apart from the copyright considerations relating to this model, preloading content limits the choices of the Library's clients to only the material pre-selected by the Library. Unlike most other libraries, e-readers at McGill are treated as equipment that can be used to display borrowed electronic resources from all the compatible material in the ever-growing collection. A small pre-selection of free classics from the public domain were preloaded in order to give clients who were borrowing the device just to test it, something readily available to read. However, at any time, borrowers had the ability to select and transfer additional e-content of their choice. In essence, library clients at McGill were given the freedom to read the collection on the device as they wished.



The pilot project was launched in March 2010, in one of the small branches of the Library, with five Sony Readers Touch Edition PRS-600. The established borrowing policies allowed for two weeks loan with one renewal, and the service was restricted to McGill students, faculty, and staff. At that stage, the service was not widely advertised, since there were a mere five devices. Nevertheless, word spread quickly and all five e-readers were constantly checked out. The success of the pilot project prompted the Library to purchase one hundred more devices and launch the service officially in all the branches in time for the Fall term 2010.

In preparation for the launch, several important tasks needed attention. First, the devices had to be added to the Library technology inventory, joining the rest of the technology the Library loans, such as laptops, cameras, and recorders. The Sony Readers were then catalogued and made discoverable through both the Classic Catalogue and WorldCat Local Discovery Tool, allowing students to find them, check availability, and place holds.

The next step was the installation of the necessary software on the public stations in the Library. Two programs are capable of managing the content between a computer and the device: Reader Library and Adobe Digital Editions (ADE). Both do practically the same job – they allow the user to transfer content from a computer to the device and vice versa – but with several important differences.

Reader Library is the software that comes with the Sony Reader. It allows for the transfer of all the supported formats (including Word documents, audio, and images) and the export of annotations made on the device, while ADE only works with EPUB and PDF formats. Reader Library is also essential because it contains a driver that enables the computer to recognize the Sony Reader once it is plugged in. Without it, ADE is unable to connect to the device. Reader Library software would normally be enough for a private user, but it does not allow for re-authorization of the device. Sony, and most other manufacturers, build and design their e-readers with the assumption that they will be used privately, by a single individual, and will not be shared. This paradigm continues to be an ongoing issue with e-readers, and more generally with the adaptation of technologies to the needs of libraries.

Naturally, if one borrows an e-reader from a library, it is fair to assume that other clients have, at a previous time, authorized the device with their personal ID in order to use it with DRM protected content. What is needed is software with the ability to facilitate subsequent authorizations. This is where ADE comes into play. ADE software recognizes the computer's Adobe ID and prompts the user to re-authorize the device, thus making it possible for libraries to lend reading devices to be used with DRM protected content. With the addition of ADE, the Sony Reader can be transformed into a true piece of library technology; one geared toward sharing.

Unfortunately, the Reader Library software did not allow for configuration in the multi-user networked environment of the Library, therefore the solution was to install ADE along with only the driver from Reader Library, which makes the device recognizable by the computers.

The next stage of the implementation focused on staff training. In order for library staff to render effective aid they must first be trained in the use of the devices and be familiar with any and all issues relating to the expected usage. Staff must know how



the device functions, what it can and cannot do, but also what content is compatible, how to find and load it, as well as be able to perform basic troubleshooting. After the information sessions, staff members were encouraged to borrow a device and use it for a week or two.

Specific procedures were established for inspection of the devices at the point of loan and again at return, as well as for maintenance, such as deleting of user-loaded content, charging, and storage. McGill librarians created a customized manual pointing users to compatible content from the Library and other sources, with instructions for loading of this content to the device, as well as tips for using the e-reader, and links to more instructional materials online. Instructional videos were also created in-house and made available on the Library website along

with selected video reviews from YouTube.¹⁹ The goal of the implementation team was to provide clear instructions for the end-user, from installation of the software, through DRM authorization, to advanced levels of usage. Information and hands-on training were offered to students by librarians during Orientation for the Fall semester.

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Selection Criteria

The decision to investigate any given library technology is something that must be based, in part, on the policies, as well as the budget, of the institution. Once a given technology has been identified as advantageous, it is important to narrow down the choices. The selection criteria will differ from library to library. It is, therefore, hard to give a one-size-fits-all approach toward the acquisition of the *best* e-reader. There is, in fact, no one item that stands above all others as an obvious choice. The best e-reader is the one that most effectively meets the needs and expectations of the institution purchasing it. The McGill Library criteria are clear and generally reflect a range of needs and expectations common to many academic libraries. While the market for e-readers was already quite diverse in January 2010 when the first five devices were purchased, McGill Library was able to narrow the list of potential devices, eventually deciding on Sony Reader Touch Edition PRS-600. This model was available from Sony Canada²⁰ and offers multilingual interface, including French – a detail of particular importance for a library in Quebec, serving a high number of francophone clients. In general, the PRS-600 was similar in interface and functions to the US models PRS-505 and PRS-700. It was also priced in the same range as other devices with similar technical characteristics.

This Sony Reader was selected because of the reliability of the manufacturer, as well as certain features that were deemed important, such as paper-like e-Ink display, which unlike a computer screen does not strain the eyes²¹ and touch screen functionality, which is now expected, due to the popularity of smartphones and tablets.²² The PRS-600 also offers an MP3 player and functionalities facilitating its use for academic purposes, such as a built-in dictionary, and the ability to highlight text and create annotations, which



can then be exported to a computer and preserved. Another seemingly minor feature, but crucial for scholarly work, is the fact that the Sony Reader preserves the original page number after text has been resized, making it easier to cite accurately.

The key selection criterion, however, was that the device be compatible with as much of the Library's existing electronic content as possible. Unlike the preloading content model employed by other libraries, McGill Library's model does not restrict the use of the devices to a small pre-selection of electronic titles. As already emphasized, such service is not an end in itself, but a means to an end, designed primarily to help clients use the Library's electronic content on the go. The Sony Reader is compatible with roughly fifty percent of the e-book content of the Library and nearly 100 percent of its e-journal and e-theses content.

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to purchase content that is specifically tied to, and only works on, a single device would have created unwanted tethers and restrictions. The obvious example for such limitation is the Kindle. As of September 2011, content provider OverDrive offers downloadable e-books for the Kindle, but the agreement with Amazon only covers USA and the service is therefore limited

to US libraries. At the present time in Canada, one can only purchase e-books for the Kindle from Amazon. Forcing such a purchasing restriction is prohibitive and creates an unwanted dependency.

E-Book Formats

The means of access represents a significant, if often overlooked, aspect of the overall information access experience. Electronic collections should also be assessed based on portability and compatibility with library technology, rather than on content only.²³ In order to establish a successful e-readers loan service, it is important to understand the constraints that the variety of e-book formats and digital rights management (DRM) restrictions present.

Currently, there exists a wide array of e-book formats with different uses and characteristics. For the purpose of this paper, we will only examine the most popular ones that are relevant to libraries and McGill Library's choice of an e-reader.

HTML (in all of its variations), is not technically a format, but is the primary scripting language used to construct websites.²⁴ In this category, we include e-books and web-based content that is only available for viewing online; it cannot be downloaded to a computer or read on a portable device that is not Internet capable. McGill Library offers approximately 500,000 e-books in this category.

The Portable Document Format (PDF) is the best known downloadable format. Unlike HTML, PDF does not require an active Internet connection, once it has been downloaded to a computer or a portable reading device. The primary strength of PDF



is that it preserves the original formatting of the text and aims to represent the content exactly the way it looked in print. It is also the preferred format for displaying works with graphic material. When viewed on a portable device with a small screen, it presents certain challenges. McGill Library offers access to roughly 500,000 e-books in this format, as well as approximately a million theses and millions of e-journal articles.

EPUB is quickly becoming the format standard for electronic publishing. It is based on XHTML and XML and is developed and maintained by the Open eBook Forum of the International Digital Publishing Forum (IDPF).²⁵ EPUB offers interoperability between operating systems, computers, and reading devices. This means that it is not locked to a particular publisher or operating system and can be displayed on a wide variety of portable reading devices, which makes it ideal for support of mobile learning initiatives at academic institutions such as McGill.

While EPUB has enjoyed growing popularity in general, it has yet to see widespread adoption among academic publishers. This accounts for the limited number of titles available at McGill Library: as of October 2011, close to 800 copyrighted titles can be borrowed from McGill OverDrive, in addition to the 23,000 public domain titles from Project Gutenberg. Fortunately, other academic publishers and content providers are starting to recognize the advantages of EPUB. To mention just a few: all Palgrave Connect 2011 content is now available in EPUB; Elsevier offers an application on ScienceDirect – “E-reader Formats”²⁶ – that converts PDF files into EPUB; both EBSCO

Being reflowable means that when the text size is either increased or decreased, the text readjusts to fit the screen. This may seem a trivial consideration but it is, in fact, a very important issue that influences the user experience tremendously.

and Coutts MyiLibrary, in communication with McGill Library, have stated their intention to start offering e-books in EPUB in the near future.

EPUB offers some appealing features. In addition to its interoperability, EPUB is reflowable, making it very suitable for mobile reading on a small screen. Being reflowable means that when the text size is either increased or decreased, the text readjusts to fit the screen. This may seem a trivial consideration but it is, in fact, a very important issue that influences the user experience tremendously.

Another downloadable format that is important to mention is MOBI, the universal e-book format for PDAs and most smartphones. It is also compatible with some e-readers.²⁷ While it has its niche, it is substantially less popular than PDF or EPUB, and compared to HTML and PDF, it is relatively new. OverDrive discontinued support for this format in October 2011. It is supported in subject areas where PDAs have traditionally been popular with users – for example, the content of certain medical databases, like Access Medicine and Access Surgery, is available for download in MOBI, and the ScienceDirect application “E-reader Formats” offers the possibility to convert PDF files into MOBI.

While discussing e-book formats that have relevance to libraries, we should briefly discuss the Amazon proprietary format, AZW. The DRM protected AZW files are only accessible on a Kindle e-reader and via Kindle applications, due to the fact that the digital rights technology used by Amazon is unique to the Amazon Kindle. The unprotected ones can also be read on a MobiPocket Reader.²⁸



DRM (Digital Rights Management)

Now that considerations of format have been examined, it is necessary to broach the thorny topic of DRM. All libraries with digital content will encounter DRM-related issues in varying degrees. Likewise, any venture into the purchasing of e-readers must be undertaken with an awareness of how DRM will apply to the newly acquired technology.

Digital Rights Management, also called by its opponents Digital Restrictions Management, is a system of information technology, used by publishers and copyright holders to control/limit user access in the following ways: number of simultaneous users, duration of access, type and number of devices allowed to display the work, printing and copying capabilities, modification/altering capabilities, number of views, and extent of content.

According to the Canadian Association of Research Libraries (CARL), “essentially, DRM allows a copyright holder to control what someone else can do with their intellectual property, no matter where the work is located.”²⁹ The exact restrictions imposed on any particular work depend on the license agreement under which it is purchased or subscribed to.

The question of using DRM on e-books is controversial. On one hand, publishers and copyright holders consider it one of the most effective ways to protect themselves against copyright infringement and digital piracy. Producers of intellectual property have the right to be compensated for their work, and to protect the integrity of that work. This is taken as a given in the world of print-based media, such as books, but becomes an issue when applied to the digital world. Still, the basic idea of protecting the creator of a work and ensuring the legal use of their production is reasonable and fair. Seen from this perspective, it is hard to deny that some mechanism should be in place to protect against illegal use and piracy.

On the other hand, DRM restricts the owner rights of a buyer of legally purchased e-books in ways that were not an issue with print. For example, it is practically impossible to resell your copy of an e-book, and there are very limited options available for lending an e-book to friends or family. These are rights that the owner of a lawful copy of a copyrighted work should have in accordance to the first-sale doctrine.³⁰ This

Thus, despite its good intentions, DRM has become one of the biggest obstacles to lending e-books in libraries; and not merely because of the copyright limitations, but also because it creates additional technological challenges to the borrowing of e-books.

doctrine is the basis on which libraries lend books to the public. Thus, despite its good intentions, DRM has become one of the biggest obstacles to lending e-books in libraries; and not merely because of the copyright limitations, but also because it creates additional technological challenges to the borrowing of e-books. Some

potential library clients give up when they face the amount of set-up necessary to access or download a DRM protected e-book. The majority of the digitally born generation are technologically adept and experience minimal, or no, difficulties.³¹ Other clients, however, may find complex setup procedures to be a frustrating and sometimes insurmountable task.



While DRM can certainly be an obstacle, the fact that it supports time-limited licenses, is what makes library lending of copyrighted e-books possible. DRM essentially creates conditions that mimic the print-based model of lending physical items. As discussion continues about whether it is right for an electronic item to be treated as a physical one, this scheme is currently being used by more than 13,000 libraries, schools, and colleges worldwide.³² The library purchases a license for each e-copy and sets a loan period, as it would with a print book. Embedded DRM features discontinue access at the end of the loan period thus “virtually” returning the item to the library. Current e-book formats supporting time-limited checkout include PDF, EPUB, and MOBI.

There are different types of DRM systems for e-books, usually incompatible with each other. The most popular ones are Adobe DRM, Amazon DRM, and Apple DRM.

Adobe DRM is the most widely used DRM system for EPUB and PDF e-books. One of its major advantages is that it is not locked to a specific device. Instead, it is similar to a user name and password scheme. New users create a free Adobe ID, where the user name is their e-mail address. This enables a user to access the e-book they have borrowed on up to six different devices, as long as these devices are all compatible with the Adobe DRM. Currently the majority of portable e-reading devices are either compatible with Adobe DRM, or run applications that enable the display of Adobe DRM-protected content. To give just few examples of the most popular devices: all models of the Sony Reader, Kobo³³ Reader, Barnes and Noble Nook and Nook Color, and the Apple iPad. The Amazon Kindle is not compatible with Adobe DRM.

The exact restrictions imposed by Adobe DRM vary according to the copyright holder’s license, but there are common characteristics making library lending of e-books possible:

1. Adobe DRM supports time-limited licenses, which allows for lending of copyrighted e-books for a predetermined lending period; it is currently used by content providers like OverDrive, EBSCO Host, and Coutts MyiLibrary.
2. The Adobe ID allows, with one license, up to six electronic copies of the same e-book to exist on different devices, including computers and portable reading devices, as long as all the devices are authorized with the same Adobe ID, thus ensuring that all six copies are in use by the same person. That makes lending of e-books and transferring them from a computer to a portable device, and vice versa, possible.
3. Having to authorize the computer with an individual Adobe ID for each user can present a challenge when clients use public stations in the library. However, if each user has a separate login (the way it works at McGill), Adobe DRM treats each login as a separate computer, even if it is technically the same machine, and thus makes possible the use of public computers in the library for download and transfer of Adobe DRM protected content.

Amazon DRM is locked to the Kindle ID, which is pre-registered automatically on an Amazon account when the device is purchased. There can be up to six Kindles registered simultaneously on the same account, which makes it suitable for family sharing, but not for library lending.³⁴ As of October 2011, Library lending of Amazon e-books with time-limited license is not possible in Canada. The only way for a Canadian library to



lend Amazon e-books at this point would be along with a Kindle device on which they are pre-loaded.

Apple's FairPlay is the DRM used for iTunes. It limits both the use of the file to specific machines and the number of copies that can be made. It is used on iBooks, as well as music and video formats. FairPlay does not support time-limited access, which means that items protected by this system cannot be loaned by libraries independently. Apple's terms of use on copyrighted items state that "educational institution...may download a Mac App Store Product for use by either (a) a single individual on each of the Mac Computer(s) used by that individual...or (b) multiple individuals on a single shared Mac Computer..."³⁵ which essentially means that similarly to Amazon, Apple allows an iBook to be loaned only along with the device on which it is authorized – a computer or an iPad, for instance.

Challenges

The process of integrating the loan of e-readers into the already broad spectrum of services at McGill Library proved challenging, but ultimately rewarding. Through this service, McGill librarians and staff learned a great deal and expanded their technological comfort and literacy, and the same happened to the Library's clients. Libraries today do not only offer items for loan, they teach information and technological literacy; this is where challenges become opportunities. With this service, McGill Library gave its clients the opportunity to learn how to overcome technological obstacles while counting on the Library's advice and support every step of the way.

As can be expected, there were some difficulties that Library clients reported. One of the recurring complaints was the initial set-up procedure and the amount of software that needed to be installed in order to make use of the e-reader. Then, of course, in order to transfer DRM-protected content it was also necessary to create an Adobe ID and authorize the computer and e-reader with it. To help clients who chose to avoid going through these steps, the necessary software was installed on the public stations in the Library. At the same time, users were given instructions in various formats in order to help them set things up at home. A special E-readers help email address was also set up in order to render additional aid.

Another issue that surfaced related to privacy. At the point where ADE prompts the user to re-authorize the device, the program displays a message giving the details of the previous authorization, that is, the e-mail address of the last user to authorize the device. Some clients did not feel comfortable with the fact that the next user will see their email address displayed. This is an issue with no solution at this point, since Adobe did not implement McGill Library's recommendation for this message to be rephrased. At this point, the only advice to users concerned with privacy is to use a more "anonymous" e-mail address when creating their Adobe ID.

McGill Library clients have also had difficulties locating the available compatible content. This problem results from the inability of current catalogues and discovery tools to distinguish between downloadable e-books and those that are for online viewing only. As discovery systems develop, they offer richer and more useful metadata, but at this point there is no way to tell from a cataloguing record whether an e-book could be



downloaded or not. The various interfaces and rules of the vendors' platforms add yet another level of complexity. A special help page on the Library website for borrowing of e-books and e-audiobooks, offers guidance with these questions.

The PDF reading experience has presented significant challenges for McGill Library clients. The first problem comes from the fact that the Sony Reader display is black and white. This means that color charts and graphs will appear only in black and white on the e-reader, rendering them potentially useless. The other PDF-related problem is that squeezing a 14" size page onto the 6" display screen of the e-reader makes it practically illegible, because the standard PDF is not text but, in fact, an image of a text, and even though technically it is downloadable and portable, it is not e-reader friendly. Attempting to increase the size of the text actually simply zooms in on the whole page, sending parts of it outside the margins of the screen. This forces the reader to scroll horizontally, as well as vertically, as they read. Using landscape orientation could improve the readability of the document, but not by much. Additionally, in some cases increasing the size might remove charts and graphs.

There is a newer, improved type of PDF, known as PDF/A or tagged PDF. Although it does not behave exactly like EPUB, it is reflowable, and therefore better suited to be read on portable devices with variable screen sizes. Unfortunately this variety of the PDF format is still not widely adopted.

Since the majority of the academic content online currently comes in PDF format, it is important to find a way to improve this format's readability on e-reading devices. One possible solution could be to develop a method for transforming standard PDFs into EPUB or other e-reader friendly formats before loading them on a portable device. Many applications can do that currently – for example, the already mentioned eReader Formats app on ScienceDirect, as well as a number of other free or paid programs unrelated to a specific vendor or database. Many of these work on the principle of Optical Character Recognition (OCR), a technology having proven problematic without consequent proof-reading, but presenting a good intermediary solution at this point.

Feedback

Valuable data was gathered from a feedback form made available in print with the device, as well as online on the Library website. From the beginning of the pilot project in March 2010, until the end of the academic year 2010/2011 in April 2011, of the total number of checkouts, 1030, 118 feedback forms were returned, representing approximately an 11.5 percent return rate. Undergraduate students accounted for over fifty percent of the loans and the feedback respectively. They were also the ones who returned the

Valuable data was gathered from a feedback form made available in print with the device, as well as online on the Library website.

most favorable comments regarding the service. The responses from faculty and staff were too few to be useful enough to make any major claims for this segment of library users – only six faculty members and ten staff members returned feedback, compared to 54 from undergraduate and 34 from graduate students. It is possible that many of McGill



Library's clients are still unaware of the existence of the service. As always, promotion of library resources must be ongoing, prominent, and above all, appealing. There were some complaints regarding the reading experience the Sony Reader provided, such as "certain glare from the touchscreen," "no backlight," "screen too small," and "device too slow." At the other end, there were equally enthusiastic praises regarding the e-reader – "easy to use," "very easy on the eyes, as comfortable as reading an actual book," and "fun to use, easy to carry." Interestingly, even people who reported negative feedback about the device indicated that they would still like to borrow it again. This was an encouraging, though unexpected response.

The most important question asked of the Library's clients was for what purpose they used the e-reader. The respondents could choose from the following three categories: 1) leisure reading, 2) academic purposes (study and/or research) or 3) both. Understandably, staff indicated mostly leisure use, but 85 percent of students and 78 percent of faculty did use the device for academic purposes at least partially, which we find to be very encouraging. As expected, most clients used the e-readers for accessing mainly text – e-books, e-book chapters, and e-journal articles, while a smaller group experimented with audio and images. Overall, undergraduate students explored the broadest range of content, including class notes, lecture slides, and even graphic novels.

During the midterm session in Fall 2010, the Library coordinator of the service received inquiries from a professor, and consequently from the campus exam proctor, regarding the Sony Reader. Apparently, a student had requested to bring his textbook on the e-reader for an Open Book exam. The fact that the device is not Internet capable could be considered a flaw in general, but in this case, this turned out to be an advantage, making the Sony Reader PRS-600 admissible to Open Book exams at McGill.

Where do we go from here?

McGill Library will continue to expand the E-reader Loan Service by adding another type of device to it. Based on the current experience and feedback, the list of selection criteria for future e-reader acquisitions has been refined by adding the following requirements:

1. The device needs to be Internet capable, so that it can also access McGill Library's content that is not downloadable. Originally this feature was not considered essential, but at this stage of the development of the service, the Library aims at all-inclusive access to the collection and services, which requires Internet capable device.
2. The device should have color display in order to improve the viewing of scientific, artistic, and any other content, containing images, graphs, and charts. This might mean giving up eInk, because even though color eInk technology is already available, none of the big and trustworthy manufacturers has yet implemented it in their devices. Color LCD screens also usually offer backlight – a feature mentioned by some users as desirable.
3. The device must offer better display of PDF files, which means either a bigger screen or more flexible zooming features.



The Barnes and Noble Nook Color was investigated and identified as a potentially viable e-reader. It has an Internet browser, color LCD screen, and very flexible zooming options that make reading of PDF files significantly easier. Another big advantage, which was not even considered before the initial test, is its ability to display non-Roman scripts. McGill Library has important collections of Russian, Chinese, Arabic, and Hebrew material that cannot be displayed on the Sony Reader. Considering these advantages, it was decided to test out a batch of fifty devices, but the project was dropped due to the impossibility to purchase, or have B&N Nooks delivered, in Canada.

The new Sony Reader PRS-T1 is priced significantly lower than the previous models. It is lighter and slimmer, and offers an improved display with adjustable brightness and contrast, unfortunately still only black and white. What makes it particularly promising is the option for wireless download of OverDrive e-books directly on the device, as well as the ability to pinch zoom in and out, which could contribute to improved PDF reading experience.³⁶ The Wi-Fi, however, does not allow unrestricted Internet browser access, but rather connection to only the Reader Store, OverDrive, and *in-text access to Google and Wikipedia*.

The Kobo is another very promising option. It uses eInk and offers crisp non-glare display. Its third edition, released in June 2011, has touchscreen functionality and the 1.9.10 software release included highlighting and annotating options, six different interface languages, and dictionary, including in-text French-English translation. Unfortunately, there is no color display option and its current beta Internet browser is not providing very satisfying experience.

The limitations that caused McGill Library to originally reject the Kindle as an option are still in place. Once the Amazon devices start providing support for library books in Canada, they will be re-examined.

The iPad, while technically a tablet, is also being looked at seriously in the context of the E-reader Loan Service. In the fall of 2011, McGill Library started preparing to launch a pilot project aimed at evaluating the iPad's possible application as library technology. There is no doubt it is a device that offers many opportunities, but it could also present many challenges. Moreover, at the current cost per unit of the iPad, mass purchase could become prohibitively expensive and needs to be thoroughly justified.

Conclusion

Overall, the E-reader Loan Service at McGill Library has been a success. McGill librarians have used this valuable opportunity to learn more about clients' attitudes and preferences. At the same time, the service has given clients the chance to try new ways of accessing and interacting with electronic resources that they might not have otherwise considered. Given the freedom to experiment and use the e-readers as they wish, McGill Library's clients have explored the potential of the devices, sometimes discovering uses librarians had not envisioned, which demonstrates the lending model chosen by McGill Library promotes experimentation and innovation.

McGill Library's clients have responded favorably to e-book readers. These devices provide portability and comfortable use during extended reading sessions. They also offer plurality of access, making it possible to carry multiple forms of content in one



container. By offering both the electronic content and providing for ways for it to be used on the go, the Library makes the majority of the electronic resources portable, giving

The freedoms offered by the technology are numerous, but for the library to leverage that value, it must have a clear plan for integrating it with its existing resources and services.

students and faculty the tools to do teaching, learning, and research in a new way. Thus, E-reader Loan Service becomes an extension of the Library's strategy for promotion of electronic resources, as well as support for mobile learning and information literacy. The e-reader, used as a library technology, provides users

with new and interesting ways to relate to, access, and understand library e-content. The freedoms offered by the technology are numerous, but for the library to leverage that value, it must have a clear plan for integrating it with its existing resources and services.

While the choice of a particular e-reader requires careful thought and planning, it is important not to lose sight of the core values supporting the need for such services, as well as the limitations imposed by the variety of electronic formats and digital rights. Consequently, it is important to focus not so much on individual devices, but on designing a solid service foundation around the needs, demands, and expectations of clients, allowing them to access their library's e-collections in innovative ways. Often, by the time a library has chosen the "right" e-reader, it is entirely possible that something new and better has come out, or will soon be released. A constantly changing market is certainly a factor of which to be aware, but should not be used as an excuse to retreat from the implementation of e-reader loan services.

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