E-book readers: what are librarians to make of them?

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INTRODUCTION

A recurring thread in many library mailing lists in recent years has been e-book readers and, more specifically, what are library services meant to do with them? In July 2009 on LIS-SCONUL, Bournemouth and Staffordshire Universities said they were experimenting with e-book readers;[1] in October 2009 on LIS-E-RESOURCES City University London and the University of Rome said the same thing,[2] with similar messages appearing on the CoFHE (CILIP's Colleges of Further and Higher Education group) list[3] and LIS-LINK.[4] So this subject keeps resurfacing. The devices have been around for a long time but only now are they entering their adolescence.[5]

E-book readers have been an interest of mine for some time. In my JISC role I have done blog posts about e-book readers, demonstrated them at library managers' meetings and dealt with queries from universities and colleges about them.[6] In my other job at Aberystwyth University I have also had queries from other university librarians and written a report on e-book readers for information services back in October 2008, after we had purchased our first devices, and on World Book Day 2009 our graduate trainees demonstrated them as part of a stall, letting users try them out in exchange for their feedback. I will be doing the same at our forthcoming 'New Technology and Innovations Day'.

The point is: everyone wants to know more about these devices. There is interest in them – the technophiliac within us is inevitably intrigued, and they are designed to be appealing – but we are not sure what to do with them. We struggle with the question of how to get best value for our users from the devices, and whether they really have any value at all.

WHAT ARE E-BOOK READERS?

E-books readers are hand-held electronic devices that display text and images. In their internal memory they can store a large number of documents, so it really is possible to have a library in your pocket. Although they are called 'e-book readers' the texts stored on them could just as easily be journal articles, blog posts or a phone directory – anything that can be stored in a text file.

The devices use a technology called 'e-ink' that is very energy-efficient, so one battery charge may last 7,000 page turns (the equivalent of reading *War and Peace* five times on one charge). E-ink also has a contrast similar to printed text, and can be read well in similar environments, such as outdoors in sunlight, where a backlit screen would be washed out.

In some ways the devices can be seen as accessibility-friendly. Most allow font and size to be changed, making text easier to read. Some models can play audio books or offer text-to-speech (though that feature is not perfect).[7] Intel are even working on an e-book reader that can scan in text and read it out to you.[8]

There are many models of e-book reader, and all have slightly different features.[9] Generally the devices support a selection of formats, including formats such as TXT, RTF, HTML and PDF, as well as those based around DRM (digital rights management) such as ePub. Most can display grainy grey-scale images in formats such as JPG, GIF, PNG or BMP. As stated above, some will play MP3s or other audio formats. It should be clear from this that some of the formats supported, such as TXT, RTF, PDF and MP3, mean that it is easy for libraries to create their own content to go on the devices.

Some devices have other features. The Kindle and Iliad both have wireless connections for downloading content. The Iliad also allows people to annotate the screen using a stylus, possibly allowing students to annotate textbooks without getting into trouble with the librarians for the first time in history, since the annotations would disappear for the next user.

We have established that UK universities are doing small-scale trials of e-book readers in an academic library context, but some of the American trials have had wider publicity. The selection below describes some that I have been following, but the 2010 Horizon Report lists many others (also from the US).[10]

Princeton University
Princeton University is trialling the Kindle DX's potential to replace textbooks and paper printouts of course materials. The DX has a larger screen than the normal Kindle, and is designed for viewing newspapers too. In this trial every participating student and staff member gets a Kindle DX that they can keep. A $30,000 grant made it possible to fund this.[11]

Penn State University
Sony donated a hundred of their e-book readers to the university's libraries and English department for a year-long project working with student groups. They want to assess the e-book readers in a number of settings and uses, including in classrooms, in their leisure reading program and for students with disabilities.[12]

North Carolina State University
This was a smaller-scale trial using more than one brand of e-book reader. The devices were loaned to students for a week at a time, and the students were able to make personal selections of books that were then loaded onto the devices by reference librarians. Newspaper subscriptions were trialled with the Kindles, with content downloaded wirelessly. The focus of the pilot was on leisure reading rather than academic texts.[13]

However, the US experience also gives us a word of warning. In January 2010 four US universities agreed to stop using e-book readers following a lawsuit by the National Federation of the Blind and the American Council of the Blind, due to the fact that blind students could not use them.[14] Of course, the same could be said of printed books, which renders this agreement with the Department of Justice a rather selective one.

Potential uses for libraries

Having seen some of what has been trialled elsewhere, we can now start to compile a list of some of the ways that these devices could potentially be used by academic libraries. It should be noted that content is king. If we just loan these devices

without content on then they run the risk of being used just by people who want to try them out as a prelude to buying their own, which is useful to the consumer but isn't our core service. However, if we add content to them prior to loan then it is an interesting extension to our normal service.

Pre-loaded with relevant content for a course
The ideal content would be course readings (e-books and journal articles) plus lecturer's notes and materials, so that the student has access to many of the materials that support a course. For some subjects it would be easy to fill e-book readers with free, out-of-copyright content – particularly for students of English literature, history, drama, classics and philosophy. For example, for English-literature students every work of Shakespeare, Austen, Byron, Dickens and so on could be added for free via sources like Project Gutenberg[15] or Feedbooks.[16] This wouldn't be spoon-feeding – the students would still need to research the critical material for themselves.

Contemporary fiction
Many libraries have a contemporary or classic fiction collection. It would not be too difficult to fill the devices with content to match some of the physical collection.

Titles in heavy demand
Titles in short loan collections that are always in demand could be supplemented by electronic versions on e-book readers.

Newspapers
With some devices, such as the large-screen and wireless-enabled Kindle DX, it is possible to subscribe to newspapers electronically, so that there is no need to have print versions.

Organisational content
As noted earlier, using supported formats means it is simple to create content for the devices. Academics could do this, but so could the library service. Ideas could include guides to subject resources; referencing style guides; advice on good academic practice and information literacy; and also a plain language 'how to use this device' guide as the first document seen.

Audio content
If the device supports the feature we can make audio material available, for example, the spoken-word version of books. The devices could also hold music, podcasts, language lessons and spoken guides, such as a self-guided tour of the library linked to a PDF location map. The added

advantage is increasing the accessibility of texts for our users.

Considerations if implementing an e-book reader service

Many libraries buy one or more e-book readers then try to decide what to do with them. These are some of the things that will need to be considered at some point before the new service can be publicised.

Content – what and where from?

Obviously there needs to be a decision as to what content to add, as discussed above. Easy options would include adding free or out-of-copyright material. For example, Project Gutenberg offers flexible formats, with no licensing problems (see above). Or books could be purchased from specialist sellers of e-books for mobile devices (assuming the licensing is okay for library loan). Costs for these are usually slightly lower than the print price.

Access model?

How will the users access the e-book readers? Will they be borrowed from the library as loanstock? This fits into our traditional services well, though Joe Wikert believes that the idea of loaning e-book readers from libraries is flawed, since demand will outstrip availability and inevitable loss or damage will be costly.[17] Another option could be to make the e-book readers available for use in a reading area, or on display. In that case there are security implications (which I will cover next). Or could the devices be given to the student, possibly funded through course fees? A very strong case would have to be made for this approach to work.

Security?

If the library opts for open access to the devices so that they can be used unsupervised, then consideration needs to be given to how the library can prevent theft. Do staff work nearby? Are there any security cameras on that area? Are the devices tagged like books so that they set off alarms if someone tries to remove them from the library? The safest option would be something like a RAT– a removable alert tag, as used in retail environments – or a stand or clamp (similar to the way Sony PRS 505s were displayed in Waterstone's bookshops), or some other way of attaching the device securely to a piece of furniture, such as a cable.[18] Note that there is such a high insurance excess for universities that for this sort of equipment there is effectively no cover.

Legal issues?

This mostly applies to DRM (digital rights management) schemes and associated licensing. Can a purchased e-book be stored on more than one physical device at a time? Does the licence allow the text to be read by more than one customer? We have already seen a different potential legal issue concerning discrimination, with the US Department of Justice agreement noted above.

Routines for loan / loading content?

Libraries have procedures in place for managing print and electronic resources, and they would need to be extended to include these devices. If the devices are to be pre-loaded with material, then a procedure for back-up and restore will be vital. Tools like Calibre are starting to appear, which may simplify this task.[19]

Records of the licence details for purchased e-books from different suppliers need to be kept, including the number of times an item has been downloaded (and this is not as simple as one might expect, as the section on digital rights management below shows). DRM software may need to be regularly updated on both the e-book reader and the computers used to transfer content to it.

The downsides of e-book readers

Unfortunately there are a number of issues with e-book readers at present, a fact that is obviously not emphasised in the advertising spiels for these devices. The hype also compounds the problem of what models to buy – there are a huge number of devices made by a large number of companies with more coming out all the time, including the possibility of entirely new formats such as large, flexible screens.[20] No-one wants to purchase a device that is going to be superseded in a few months.

Lack of academic content

If you browse online e-book suppliers, it seems that their content is primarily fiction and biography; their provision of current, quality textbooks is rather poor. It is perhaps telling that on the Iliad's official UK supplier's own bookstore one of the top five categories offered is … 'erotica'.[21] This seems to support the claim that one of the advantages of e-book readers is that on a bus or train no-one nearby need actually know what you are reading, doing away with the need for fake book covers to hide what is really being read. It should also be noted that the e-versions of texts are also frequently limited in comparison with the print versions.[22] Images and tables may be lost or unreadable.

Fiddly, fragile, need charging

E-book readers have extra cables to keep track of (for power and for connecting to a PC). Like most modern consumer products, the devices are fairly fragile (the screen being one weak point), and nowadays things are not designed to be easily repaired. Although a charge may last some time, they do still require charging fairly regularly, and this frequency will increase as the battery ages. So e-book reading devices do not have the simplicity of printed books, and it is unwise to read them in the bath.

Confusion over terms

This is particularly a confusion for our users. Many people understandably expect to be able to download e-books from online aggregators to an e-book reading device – however, this is often not possible due to restrictive DRM, despite easy transfer of data being an expectation of many people. I checked with the major e-book providers we use and for none of these is it easily possible to download their e-books to portable devices. Some only allow their e-books to be viewed online (e.g. DawsonERA, Gale Virtual Reference Library, Ovid E-books); others allow downloading but only one page at a time (e.g. Academic Library, MyiLibrary). The fact that the library offers e-books which cannot be read on an e-book reader leads to an inevitable level of frustration, and the potential of e-book readers is not being fully realised. The two questions are to do with ability versus permission: about whether it is technically possible to download e-books onto the readers, and whether the licence allows us to. 'Can I?' is largely being solved by technology and is simple, but 'May I?' is a quagmire. Which leads us to …

Digital rights management (DRM)

Unfortunately, as with many modern technologies (high definition video, some PC software, some music releases), DRM is a barrier. It has been said with some justification that DRM only ever inconveniences legitimate customers. The ideal of being able to download all e-books as TXT, RTF or PDF files for easy use on any device has not happened, meaning that if you source e-book content with DRM then you will face inconveniences, but if you limit yourself to non-DRM formats you are potentially limiting the relevance of the content to your users. I will illustrate this with a few points.

1. Extra steps. My experience with purchasing e-books from Waterstone's' online store is a good illustration of the barriers in place. The instructions on their website state that all their e-books are in the EPUB format secured with Adobe ADEPT digital rights management.[23] What this means is that you have to create an account; then install special Sony transfer software; then you have to install Adobe Digital Editions; then you have to create another account to get an Adobe ID (whether you want to or not); then you have to 'authorise' your computer and any other device you want to use; and over time you have to regularly update all this software to keep reading the e-book you have purchased. That is all assuming nothing goes wrong, and note that is just for one DRM format from one supplier - if you get books from elsewhere you may face whole different set of processes. Compare all that to just using drag and drop in Windows Explorer to put a non-DRM e-book on the device.

2. Kindlegate. In June 2009 the GearDiary blog publicised that some e-book providers such as Amazon only allow you to download books to your device a limited number of times before you have to repurchase.[24] This is not much of a surprise, but the twist was that there was no way of knowing how many times you could download the books - even the seller did not know! This would make the process of a library managing e-book reader content much more difficult. The blog branded this 'KindleGate'. It is just one illustration of all the hidden aspects of DRM schemes.

3. Format incompatibilities. Bookeen sell the CyBook Gen e-book reader. It supports various formats of e-book, including Adobe DRM and Mobipocket. However their website points out that 'For legal reasons Mobipocket and Adobe DRM can not co-exist in the same device'.[25] So if you have books from suppliers using both formats you can't legally view all the books you have bought on your e-book reader. Another example here is that the Kindle uses a proprietary Topaz format - you cannot read Kindle books on other devices, or non-Topaz DRM books on a Kindle.

The environment

There is a growing green ICT agenda[26] and we need to give much more consideration to the environmental implications of the services we offer. As such we need to evaluate whether something is really needed, rather than just purchasing devices because we feel that we should have one. How green are these devices? Not so green, Nicholson Baker suggested sarcastically.[27] In February 2009 the Guardian pointed out in an article on e-book readers that the lifespan of many devices now is just a few years, a situation worsened by manufacturers constantly competing to bring out new models.[28] It warned us that disposal of electronic

items is a huge problem – in the UK alone we throw more than 6 million electronic items away every year, and the toxic chemicals in just one mobile phone have the potential to pollute 600,000 litres of water.

I have examined a number of different models of e-book reader, and none of the major manufacturers enable a user to change the limited-lifespan internal battery, something that should be a straightforward procedure, thus showing that these devices are not designed for long ownership or maintenance.

ALTERNATIVES? SPECIALISM VERSUS FLEXIBILITY

Some technologists question the whole point of specialist e-book readers. Does the future of book reading lie in dedicated devices like the Sony PRS, or in more versatile gadgets like mobile phones? The only unique selling points e-book readers have is the paper-contrast screen and long battery life. They don't have flexibility of purpose, and generally do not have colour or touch screens. So what are the alternatives?

iPhone / iPod Touch / mobile 'smart' phones
The screen on these devices may only be around 3.5 inches, but for owners the convenience of also being able to read e-books on them[29] outweighs such considerations. In his New Yorker article Nicholson Baker describes how he soon gave up his Kindle 2 in favour of his iPhone.[30]

There are so many iPhones and iPod Touches out there that in many cases they render extra devices unnecessary.[31] Factor in that any modern smart phone or MP3 player can also display text and it turns out that - although not perfect - very few people need an extra device unless they are very heavy readers.

Small-format laptops / tablet PCs
Netbooks (small format laptops) have seen a huge rise in popularity recently. Small and easy to travel with, but with satisfactory battery life and capable of acting as a desktop PC when connected to an external monitor and keyboard, it is not difficult to see why.

In a recent mailing list discussion[32] some librarians mentioned academic databases that can be accessed on mobile devices. That has obvious value. But e-book readers can't access those databases any more than they can access subscribed e-books on the major platforms. However netbooks can access online databases, as well

as being able to display e-books, connect to the Web, act as a communications hub (e.g. for email and Skype), play music and video, even games: frequently for almost the same price as an e-book reader. With the launch of the new Apple iPad tablet computer[33] the number of portable small-format PCs is only going to increase.

Gaming devices
There are also many portable gaming devices that can be used to read e-books. The Nintendo DS has a book-like format to begin with, and it is possible to either buy an e-books cartridge[34] or to be more adventurous and install specialist software for greater flexibility.[35] The Sony PSP handheld console also offers straightforward purchase options[36] or the ability to get more hands-on in using it to read e-books.[37]

CONCLUSION

Many librarians are interested in the potential of e-book readers to enhance their services, and there are a large number of trials. However despite some of them offering potential, there are also a number of concerns which libraries need to be aware of, and it may be that the devices sit better as a very specialised consumer device than as part of a core library service.

Things may improve with time,[38] but at present it seems that the recent summary by CNET UK, the expert technology review site, is an accurate description: 'no ebook reader is worth buying yet. No ebook store is adequately equipped to fulfil your needs, and no one product has matured to the point at which we can unquestionably recommend it'.[39] Caveat emptor.

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