Scholarly e-books: the views of 16,000 academics

Results from the JISC National E-Book Observatory

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Abstract

Purpose – This study, a part of JISC-funded UK National E-Books Observatory, aims to find out about the perspective of students and academics, the main e-book users, on e-books.

Design/methodology/approach – The paper provides an analysis of two open-ended questions about e-books, contained in a UK national survey conducted between 18 January and 1 March 2008. The survey obtained a response from more than 20,000 academic staff and students; 16,000 free-text responses were obtained to these two questions.

Findings – The study discloses that convenience associated with online access along with searchability was the biggest advantage of e-books. The study shows a potential market for e-textbooks; however, e-books have yet to become more student-friendly by improving features such as printing and screenreading.

Originality/value – This is the biggest survey of its kind ever conducted and it improves one's knowledge of what the academic community thinks of e-books.

Keywords Electronic books, United Kingdom, Libraries, Students

Paper type Research paper

Introduction

During the last decade libraries together with publishers have made a successful move towards the provision of journals and databases in online format. The next information resource that is destined to be part of this digital transition would appear to be academic books. Although the move towards e-books in academic libraries seems to be very challenging, the prospect looks bright. E-book publishing has been growing rapidly and the International Digital Publishing Forum (Industry eBook Sales Statistics, 2005) reports a 23 per cent increase in e-book revenues in 2005 compared to 2004 and a 20 per cent increase in e-book titles published year-on-year. More libraries are also adding e-books to their collections. These are all signs of progress on the

supply side. But what do we know about the demand side? What is the perspective of students and academics, the main e-book users, on e-books? In order to gain a deep understanding of the prospect of e-books usage in the higher education sector, JISC funded the UK National E-Books Observatory.

Project background

The JISC National E-Books Observatory project (www.jiscebooksproject.org/) is a ground-breaking project in which over 120 UK universities receive two years free access to course reading materials in e-book form to support students studying in Business and Management, Medicine, Media Studies and Engineering. The purpose of the Observatory was to license e-core reading books relevant to the UK higher education taught course students in the four mentioned disciplines, observe behaviours and develop new models to stimulate the e-books market. Publishers were paid £600,000 for 36 textbooks for a period of two years. The books were supplied on two platforms: Wolters Kluwer Health and MyiLibrary. The impact of "free at the point of use" e-books on publishers, aggregators and libraries would then be assessed employing a mixture of deep log analysis, questionnaires and interviews. The knowledge obtained would then be transferred to stakeholders to help stimulate an e-books market. This paper assists in this transfer by providing an evaluation based on a questionnaire, which we believe to be the biggest ever conducted into e-books.

Related works

Although in terms of size and representativeness no survey study conducted comes close to the current study, there have been a few studies that have polled different user communities in order to find out about their opinion of e-books. Chu (2003) reported on a survey conducted in a class she taught at the Palmer School of Library and Information Science. The study showed "around the clock availability" and "searchability" to be the most favourable features of e-books and "being hard to read and browse" or "need for special equipment" as reasons hindering the use of e-books. The results clearly could not be generalized and do not give us a sense of how end-users perceive electronic books. This is because the survey was distributed to only 27 students as potential users, all of them studying to be librarians. Another survey of 118 self-selected participants, conducted as part of the California State University E-book Task Force in 2001, showed that the users were generally pleased with netLibrary (an e-book platform), though 60 per cent said they preferred print (Langston, 2003).

Anuradha and Usha (2006) surveyed 101 staff and students (with a low response rate of 2.94 per cent) at the Indian Institute of Science in 2004. The responses indicated that the students tended to use e-books more often than faculty members and staff. Those who did use e-books mostly used reference and technical material. Another survey of all students, faculty and staff (with a healthy 2,067 respondents this time, 30.1 per cent response rate) at the University of Denver in 2005 by Levine-Clark (2006) showed that e-books were used by about half of the campus community. However, most of these people used them only occasionally. About 68 per cent of faculty, 57 per cent of undergraduates and 64 per cent of postgraduates used them occasionally. Generally, of the 1,116 people responding to this question, 28 per cent used e-books once only, 62 per cent thought that they used them occasionally, and 10 per cent believed that they used them frequently. When asked about how they typically used e-books, of the 1,148 people saying they used e-books, 57 per cent read a chapter or article within a book, and 36 per

cent read a single entry or a few pages within a book, but only 7 per cent read the entire book. The survey (Levine-Clark, 2007) also revealed subject differences between users. For example, humanities scholars, compared to their peers in other disciplines, were more aware of e-books and tended to discover e-books through catalogues. However, this greater awareness did not translate to greater use and they used e-books almost at the same frequency as the other respondents said they did.

E-book provider eBrary conducted a "global" survey (McKiel, 2007) in which 906 individuals representing about 300 higher education institutions from 38 countries (but mainly the USA, the UK, Canada and New Zealand) took part. The aim of the survey was mainly to measure faculty attitudes towards e-books. Among the important findings was that half of faculty said they now preferred to use online resources, while just 18 per cent said they preferred print. Some 89 per cent of respondents used "educational, government and professional" web sites for research, class preparation, or instruction, followed closely by e-journals (86 per cent). Indeed e-journals tended to be thought of as a more appropriate resource for students than e-books. A question was asked "How do you currently integrate the use of e-books into your courses?"; 372 people said they encouraged students to use e-books as a viable resource, 319 did not; 250 said they used chapters/sections for course reading, 146 said they put links in course management software; 83 said they required the reading of entire text. When asked "What do you feel would make e-book usage more suitable for use in your area?" the top three answers were: greater breadth and depth of collection; ability to download; and fewer restrictions on printing and copying. In the study summary, Allen McKiel wrote that "e-books had a fairly poor showing" and they rank "down with personal and corporate web sites". This supports eBrary's librarian survey, where 59 per cent of librarians said e-book usage was "fair to poor".

A survey of 1,818 staff and students at University College London (Rowlands and Nicholas, 2008) as a forerunner of the current survey showed that e-books clearly compare very unfavourably indeed with print titles for perceived ease of reading. The benefits of e-books cluster around convenience: ease of making copies, perceived up-to-dateness, space-saving, and around the clock availability. Hard copy is decisively favoured in terms of ease of reading. There was a big difference between men and women in respect of features and functionality: men tended to rate these aspects much more highly.

Methodology
As part of the JISC observatory project, a nationwide benchmarking survey of students and staff of participating universities was conducted. The online survey was designed and piloted by members of the CIBER team at University College London and implemented using Survey Monkey (Professional version).

Information about the survey was distributed to our partners in higher education libraries and they made very considerable efforts to market the survey to staff and students in their universities. Links to the live survey database were distributed via e-mail, staff and student newsletters, via departmental secretaries and embedded in library web pages.

The survey ran between 18 January and 1 March 2008, over which period 22,437 full or partial responses were received, which makes it by far the largest survey ever conducted on the subject. Data collection ceased when the target of 20,000 full completions was reached. The fact that 89.1 per cent of our respondents managed to get to the end of a quite long and complex questionnaire is a clear indication of the level

of interest within the academy in e-books. We received responses from 123 universities before the questionnaire was switched off.

The results of the quantitative part of the survey were analyzed and published elsewhere (Nicholas *et al.*, 2008); presented here are the findings of two open-ended questions, which were included in the survey. The attraction of the free text analysis is precisely that, respondents were free to express themselves and were not constrained or shoehorned by the questioner. While the questionnaire was open to both staff and students the respondents to these two questions were almost wholly students. The respondents of the survey provided large numbers of comments in reply to the following two questions:

(1) *In your opinion, what were the biggest advantages that e-books offered compared with a printed book?* (Please volunteer up to three reasons). This elicited 11,624 responses. Although the question asked for three advantages, most of the respondents mentioned just one. In total 11,763 advantages were mentioned.

The second question was more general and supplementary in tone; it was a catch-all question:

(2) *Is there anything that you want to add regarding course texts, print or electronic, or about your university library?* In total 4,809 comments were received to this question. Some of these comments related to advantages and benefits of e-books as well.

The answers to these two questions form the basis of this article and were analyzed using the software QSR N6, a text-analysis software package. Each response was coded using themes that were drawn from the answers.

Findings

Advantages of using e-books

This section presents the respondents' answers to the first question. It should be mentioned that due to the nature of the answers (free-text comments) and the fact that the phrases and words used by respondents to describe the advantages could be interpreted in more than one way there is some overlap between concepts.

Online access

Clearly the main attraction is that e-books are more accessible than print books, meaning that users can get at them wherever they are and at whatever time they like. This reason accounts for more than 52 per cent of the advantages mentioned, and about 55 per cent if we include the related category, convenience (Table I).

The attractions of instant (and rapid) access were mentioned in about 1,380 of the comments that related to the attractions of online access. Of the online access comments, 1,000 specifically cited the fact that e-books can be accessed from a distance and that the user does not have to travel to the library in order to use them. Indeed, many respondents actually mentioned their happiness at not needing to make a trip to the library for this purpose. Unsurprisingly, this feature was especially appreciated by distance learners. About 500 comments were related to availability – 24/7 access to e-books. A few of the many comments follow:

Can access from a remote location (North of Scotland).

Advantage	No	(%)
Online access	6,169	52.44
Searchability	1,556	13.23
Cost	1,266	10.76
Portability	623	5.30
Convenience	340	2.89
Eco-friendly	323	2.75
Storage	258	2.19
Easy to navigate	253	2.15
Multiple users	203	1.73
Easy to locate	152	1.29
Copy paste	123	1.05
Easy to read	87	0.74
More choices	53	0.45
Display flexibility	49	0.42
Relevance decision	47	0.40
Access to books not available in print	40	0.34
Easy to annotate/highlight	37	0.31
Easy to share	27	0.23
Micro-access	22	0.19
Up to dateness	19	0.16
Bookmarking	15	0.13
Quality graphs/colour	15	0.13
Multitasking	12	0.10
Interactive	7	0.06
Other advantages	67	0.57
Total	11,763	100

Table I.
E-book advantages

> E-books are convenient in that I can access them from my dormitory instead of having to go all the way to the library.

> I am a distance learner and could only get the book online unless I travelled.

> It's always available – if you have a web connection.

Searchability
The greater retrieval opportunities provided by e-books were the second most mentioned characteristic (13.2 per cent). This rises to 15.4 per cent if we include navigation (see the following). Digitisation has created numerous search pathways through books and this is appreciated. Even in the case of PDF files, the Ctrl + F feature was mentioned as a favourite feature for finding relevant content. Some illustrative comments follow:

> Could search within the text using key words.

> Ease of finding information with search options.

> Easy location of phrases and words via the "find" mechanism.

Cost
Cost was the only other advantage to reach double figures (10.8 per cent). All comments related to financial issues were put under this category including those that related to e-books being free and cheaper. Clearly there is confusion here in the minds of students of what constitutes free. Some illustrative comments follow:

A lot of the e-books are free of charge.

Cheaper than buying the book.

Didn't have to buy it.

Portability
Portable is not a word you would associate with e-books but quite a few (5.3 per cent) mentioned this quality. They were said to be "lighter" than printed books and they did not have to be carried around. Here some students clearly have downloadable e-books in the form of PDF in mind while none of the e-textbooks provided through the project were downloadable. Some illustrative comments follow:

Easier to carry around – on ipod.

No weight.

Portability - I can take a lot of books on a single computer, memory card, external hard drive.

Portable, we do not have to carry big books from one place to another, useful for international students.

Other advantages
The only other advantages that attracted more than 0.5 per cent of comments (in ranked order) were:

(1) *Convenience*. A category which overlaps with "online access". Those comments (2.9 per cent) that mentioned ease of use or included the terms convenience, convenient and so on were put under this category. Those who used the word convenience but then specified why (for example, because I do not have to leave home) were categorised under other relevant categories, like online access.

(2) *Eco-friendly*. Refers to the fact that they do not use paper (2.9 per cent). Again a possible surprising response and probably not one contained in many closed questionnaires. *Good to the environment since less paper used.*

(3) *Storage*. Unlike hard copy books, it was said that e-books do not take a lot of space on the shelves or on the desk (2.2 per cent).

(4) *Easy to navigate*. It is easier to navigate e-books, scan through them and browse them more quickly and easily. It is also easier to locate specific sections in the book by following hyperlinks or menu pages that aid navigation, such as hyperlinked table of contents (2.2 per cent). This, of course, is also related to searchability feature. Illustrative comments: It is easier to find the relevant sections without having to keep flipping through pages. Ability to scan faster and with greater ease.

(5) *Multiple users*. Simultaneous use, meaning students do not have to wait for the hardcopies to be returned by other students or put up with short loans and the like (1.7 per cent).

(6) *Easy to locate*. E-books are easier to locate and find in comparison to hard copy books for which students have to search in catalogues and then on shelves (1.3 per cent).

(7) *Copy and paste*. E-books enable users to copy and paste pieces of text, and images into their own documents, something we know from past research students is appreciated (1.1 per cent).

(8) *Easy to read*. Some – but not many – students even thought them easier to read (0.71 per cent).

Perhaps, as interesting, are the often-mentioned advantages that did not attract that much support. Thus readability obtained a very small number of mentions (0.7 per cent); so too did wider choice (0.5 per cent), up to date-ness (0.2), better quality graphics (0.2 per cent) and interactivity (0.2 per cent), although in regard to the latter not much interactivity was provided by the two platforms.

Catch-all question
This question was really open-ended and gave everyone an opportunity to say anything they felt relevant to the survey. The question was:

Is there anything that you want to add regarding course texts, print or electronic, or about your university library?

Normally such questions receive very little in the way of feedback but not in this case, nearly 5,000 people responded! Clearly e-books are a hot issue and everyone wants their say. Inevitably, a considerable proportion of comments were not directly related to e-books – comments were also made in regard to libraries (16.3 per cent) and the survey instrument itself (0.8 per cent). Table II provides the details.

Comments	No	(%)
Library practices and provision	931	19.35
General expressions in favour of e-books	634	13.2
Requests for the provision of more e-books	632	13.1
Screen-reading as a problem	366	7.60
Preference for printed books	289	6.00
Problems with access hardcopy textbooks	250	5.20
Need for better promotion and instruction	195	4.05
E-book advantages	90	1.87
Problems of access	87	1.80
Better printing feature for e-books	78	1.62
Saving and carrying e-books	73	1.52
E-book disadvantages	71	1.47
E-books as supplement not substitute for hardcopy	67	1.40
E-book technology problems	47	0.97
Comments related to survey instrument	38	0.80
Reference or factual use	37	0.77
E-book, subject-dependent	15	0.31

Table II.
General comments

Library practice and provision
The bulk of the comments here concerned:

- The demand for more course textbooks; there were many complaints about the unavailability of core textbooks:

  Core books are never available. Libraries do not have enough of the core books in short loan.

- The need for more up-to-date editions of textbooks:

  Many of the textbooks are very old, not up-to-date.

  I have noticed that the majority of the engineering related textbooks contained in the library are very old some from 1976. I would like to see more recent editions of these books.

There were also quite a few comments regarding student happiness with the library:

I am very satisfied with my university library!!

The rest of the comments concerned things such as lack of computers, bad lighting and students hiding books to ensure they can get hold of them later.

General expressions in favour of e-books
Of the comments, 634 (13.2 per cent) were expressions in favour of e-books and these comments should be read together with the comments given in the first open-ended question. Users expressed their preference and enthusiasm for e-books with comments like:

Please, please, please: e-books are a lifesaver!

E-books are a godsend.

More e-books
Of the people who left comments 632 (13.1 per cent) wanted more e-books to be available. Many users asked for more e-books to be available in their own subject area, where they felt there was not enough (or any) available:

Add more on mental health as this is the area I am studying.

It would be extremely helpful if all books were available as electronic-books.

There were two other communities that were vocal in asking for more e-books. First, there were those people who tended to study remotely and could not travel to the library easily; they were distance learners, part-time students or people who simply preferred not to go to the campus to read material (e.g., a mother who is a student). The following comment was illustrative:

My course is delivered through distance learning and would be so much harder without electronic resources.

The second community were disabled users (26 responses obtained) – people who experienced visual difficulties or had problems with mobility:

As a student who has reading difficulties, being able to access online material has made assignments much easier to handle, as there is no worries over returning books or having short loan times.

I would like to point out that e-books are a terrific resource for visually-impaired students in particular, especially bearing in mind that university libraries supply almost no Braille or large print resources and relatively few audio resources.

However, it was pointed out that not all categories of health-impaired users benefited from e-books. Dyslexic users found it hard to use e-books in their current form. They require some changes to be made in the visual and graphic settings of e-books systems:

As I am dyslexic I find it difficult to read from the screen and often have to "print out". It would be helpful if the background was not white or if it was then the text in a different colour than black, e.g. Mid-Blue. Many of my friends who aren't dyslexic have said that they also find it a "nicer" read when the text is either blue or a different background shade is used.

I prefer books as I'm dyslexic and I find electronic versions hard to read; however, if you could set it up to change the background colour that would help.

I have glaucoma and find prolonged reading from the screen difficult. I need to print off material and it is frustrating that I cannot edit on screen and print at a suitable font size and layout or to omit pictures to save printing costs. Living in the Hebrides makes me more dependent on E-resources.

Screen-reading
The biggest disadvantage by far was thought to be the difficulties of reading from the screen. About 366 (7.6 per cent) respondents complained about the difficulty of screenreading. The following user complained about this but also proposed a solution s/he personally has applied:

The only problem with e-books is that eyes can get very exhausted reading from a screen. I finally solved it adding a filter to my normal glasses, which reduce brightness (my glasses are blue).

The problem with screen reading is not only that it leads to tired eyes; users also found it harder to concentrate and absorb the information when they read from a screen:

The predominant reason I do not use e-books, is that I often find the information harder to absorb when read from a screen. Also, reading from a screen for prolonged periods of time tends to cause migraines; therefore, longer texts (which are more or less unavailable as it is) would be inaccessible to me. As an English student, this puts e-books at a huge disadvantage.

The problem with screen reading is also a main cause of subject-dependability of e-books (see the following).

Preference for printed books
There are many users who would prefer hard copies to e-books. About six per cent of the respondents stated that they preferred hard copy books in normal situations. The following comment is an example of a print advocate:

In spite of the invaluable speed and convenience of research and access to material via the web and through e-books, there is nothing more contemplative and absorbing than to sit down with a physical book – to flick through the pages; to instantly refer back and forth; to

wander across and down the page without distraction and in the comfort of your favourite places, whether at home, at work, in the park or on the beach – and they are "oh, so slim-line, compact, portable, restful and very, very cheap!" … OK – so the manufacture of paper is damaging to trees, but the computer is more responsible for global warming and is probably not the safest way long term way in which to store and convey the sum total of human knowledge for the benefit of future generations. But while not advocating a return to the durable technology and methodology of the "Rosetta Stone" at this present moment in time, I would encourage everyone to consider seriously the merits of paperback and hardback books continuing to be available and vigorously promoted alongside the virtues of web and e-book technology.

Solution to hard-copy supply problems
Although many respondents were enthusiastic about e-books *per se*, they also had very pragmatic reasons for welcoming e-books. Some students, for example, considered e-books as a solution to some of the problems they faced, especially in regard to (problematic) access to hard-copy titles. About 250 of the comments (5.2 per cent) were related to printed books. The majority of these comments were related to textbooks or the books that lecturers recommended. Students complained about the lack of hardcopies of textbooks, short borrowing time, difficulties accessing the recommended texts and so on. In this kind of situation, it is natural that some students (about 70, 1.5 per cent) see e-books as the solution to all these problems:

> Would be good to have core subject texts as e-books as there is no way libraries can supply the books in the number students would require. Also students find books too expensive.

Promotion
According to the responses there seems to be a lack of activities for promoting e-books on the librarians' side. About 195 (4.05 per cent) comments indicated the need for better promotion of e-books among students and lecturers:

> Better communication between course leaders and library staff, better flagging of e-resources, both on library sites and in course handouts needed in order that their use is maximised.

> I don't really know anything about electronic sources, so it would be better if the librarians were more forthcoming in telling the students about them.

The lack of awareness about the availability of e-books was accompanied by confusion about what an e-book actually is:

> I am not sure whether e-journals count as e-books. If e-journals are included then I am a very regular user of e-books. However, I do not read textbooks online.

There was also a lack of knowledge about how to access and use e-books and e-resources and this highlights the need for instructions and the improvement of information literacy programmes at universities:

> I could do with a course on how to access these things as I am not very technically minded I don't know how to access the e-books.

> I don't think that there is enough emphasis on lecturers and tutors explaining to students HOW to use all the various applications in the library. I had to teach myself about these, a seminar for all those interested might be of help.

Advantages of e-books
About 90 (1.9 per cent) respondents highlighted the advantages for e-books. The
following are not previously mentioned:

· Do not require limited access time (don't have to be returned to the library).

· Solve the lack of space in libraries.

· Are good for snippets of information, reference use and "how-to" manuals.

· Are good for research and systematic review as well as teaching.

· Can be used anywhere, out of campus by distance learners, disabled, and
part-timers.

Problems of access
Around about 1.8 per cent (87) of respondents reported difficulties in accessing e-books.
Although some of these problems might be related to specific libraries there is still an
issue that librarians and e-book publishers need to investigate and resolve. A
significant proportion of access problems were related to failed attempts to access
e-books off campus:

> Better access to e-books online. It fails very often when accessing from home.

Athens is a well-established means for accessing electronic resources out of campus and
some respondents appreciated it (for example, The Athens system is very useful for
e-books and journals from, e.g. JSTOR). However about 31 (0.6 per cent) of respondents
expressed that they were unhappy with Athens or that they had problems using it:

> Athens is a cumbersome system and I wish it could be simplified.

> Getting access to e-material has so far been a nightmare, especially through Athens. So I have
> not used e-books as much as I might in the future if access is easier for the user.

Another type of access problem was related to simultaneous access by more than one
user. Some e-books systems do not allow this or have restrictions as to how many users
can read an e-book at the same time:

> The availability of e-books is sporadic and just like going into a standard library, if two users
> are trying to access the same book at the same time on a network, it doesn't allow access to
> the book for one of them, which is bad.

Printing problems
Students wanted to be able to print part of the e-books they read, whether to read them
at their convenience or highlight and annotate them. About 60 (1.3 per cent)
respondents complained (a relatively small number it has to be said) about problems
with printing, either they did not allow this or there were restrictions. Also about 18
(0.37 per cent) respondents expressed that they wanted to be able to print sections of
e-books easily:

> E-books are useful. My main gripe with them is the way in which you print them off. I have
> tried to print out whole chapters and cannot do this, I do not know why. Instead I have had to
> print out groups of pages and then put them together to form the chapter. This is annoying
> and makes accessing e books more tedious and time consuming that it otherwise might be.
> However, on the whole I think they are a useful addition to hard copy books.

Saving and carrying problems
In total, 73 (1.5 per cent) students said they wanted to be able to save e-books and keep them or carry them on their digital devices (laptop, ipod . . .):

> An e-book is not very helpful if you cannot download it on a USB stick or similar.PDF versions of the books are much easier to read than HTML versions. I would prefer to see more and more books in PDF format.

There could be a number of reasons for this preference. First, they want to be able to read an e-book without the need of being connected to the internet and being online. Besides the problems users might have with getting constant internet connection, being online, as a student mentioned, is a source of distraction. While online, a user is more likely to get distracted from his or her reading because of e-mails and web surfing.

The other reason (and another disadvantage) is the confusion about the pagination of html-based e-books. A few respondents mentioned that they were confused about the page numbers and pagination structure when they read e-books. This obviously is not a problem in the case of PDF files.

E-book disadvantages
Besides the disadvantages mentioned already, like screen-reading, printing, saving and so on, there were other disadvantages mentioned by about 71 (1.47 per cent) respondents, of which a selection are presented in the following:

(1) Could be deleted accidentally (assumed that they can be saved).
(2) Are difficult to browse or skim read (might be specific to some platforms).
(3) Are overpriced.
(4) Can "be tedious if the internet connection is not fast".
(5) "Play havoc with an author's royalties".
(6) Lack serendipity, they remove the ability to accidentally stumble across something on the shelf, which is often more influential than what was originally being looked for.
(7) Make students over-reliant on computers and reluctant to use the library and do active research.
(8) Are not easy to concentrate on while reading them and it is hard to absorb their information (computer and internet could be source of distraction).
(9) Reduce the control on plagiarism and increase the concern over copyright.
(10) Makes it hard to annotate and highlight and so on.

A supplement not a substitute
About 67 (1.4 per cent) comments were in some way related to the fact that e-books and printed books should co-exist. Users found different and supplementary applications for e-books and hard copy and wanted to benefit from both. Students do not want to see an exclusivity of formats. There was also concern that some university libraries considered e-books a good alternative or substitute and therefore replaced printed books with e-books. Some were concerned that the move towards the provision of more e-books means cutting the number of hard copy books in libraries:

E-books do a quite different job from printed books and manuals and the one should not be assumed to be a replacement for the other. Printed books are still better for random access if you know what you are looking for – search facilities are not the same thing. Casual browsing will also always be easier It's actually much harder to read and speed read from a screen and the actual learning process is different – some methods will suit some people and not others. E-books and printed materials must complement and not compete with one another for the richest possible learning experience that is accessible and helpful for the greatest number of people.

I am greatly concerned by the present very clear agenda to reduce the number of books in libraries, thus removing one of the most important planks of learning, self-directed study.

E-book technology-related problems
About 47 (0.1 per cent) comments were about technology-related problems. Seventeen respondents were unhappy about the use of DRM in e-books for different reasons, for example some are incompatible with Linux or Apple computers:

My main concern and I think the single most important issue in the future of electronic books is the problem of DRM (digital restrictions management).

Aggressive DRM is one of the very few reasons that prevent me from using some e-books.

There were a range of other specific problems with the technology that e-books use that were mentioned in the comments. Based on comments, a list of some of them is presented in the following:

(1) Ebrary requires specific browser and plug in and not friendly to Linux and Firefox, Ebrary is too tied to Microsoft technology.

(2) E-books need fast computers and high speed internet connection.

(3) ebrary reader is not flexible so it is hard to resize it to maximise the size of the window. I also find it hard to read from as the screen moves to the next double page rather than to the second of the pages being viewed, which makes it disorientating and fiddly to read from.

(4) E-book interfaces are not very suitable; too much space is taken up by menus. An example is MyiLibrary interface – so much of the screen is taken up with browser bars, status bars, controls on the left, etc. that the book is a teeny thing in the middle of the right hand side.

(5) Reading e-books on screen takes time but the interfaces log the users out of the system every 15 minutes or so for security reasons.

(6) Some e-books not compatible with Mac or Linux.

(7) MyiLibrary does not like skim reading of more than about 15 pages - it thinks you are trying to print more than copyright allows and threatens to boot you out.

(8) Pagination is not always obvious.

(9) There are too many platforms and too many access modes and this causes confusion.

(10) There is a disconcerting trend towards proprietary e-book formats, as used, for example, by ebrary and British Library that are undocumented and

unsupported on many platforms. There is need for standardisation. Using standardised open formats that can be read by a variety of pieces of software or a variety of platforms is important. Using well-known, open standards is more likely to also enable computers to index and search the e-books.

(11) A lot of e-books are not compatible with reading software on a device other than a, for example a Palm handheld.

Reference use

The difficulty of screen-reading, together with the advantages of digital media in regard to ease of searching and locating specific keywords or phrases, make e-books suitable for reference use or suitable for the fields where users need only small pieces of information rather than doing large amounts of reading. About 37 (0.77 per cent) respondents mentioned that e-books are good for dipping in, or for looking for specific information or reference use:

I feel electronic texts would be a valuable resource for reference only.

Another property of e-books that makes them subject-dependent is the assumption that they are or can be more up-to-date than printed books, hence more suitable for the fields that deal with cutting edge science and technologies:

I read mainly leading edge technology publications, hence online only.

E-book subject-dependent

As mentioned before a few properties of e-books make their attraction subject-dependent. For example, screen reading makes them unsuitable for the subjects that require a great deal of reading, such as those in the humanities.

A few respondents from English Literature pointed this out:

Studying English Lit. at degree level involves a great amount of reading which just can't be done with e-books; it is just too uncomfortable on the eyes and posture to read off screen for any great length of time.

I am a part-time student studying English Literature, but I also use the library for my work as a business analyst – and in this area I am more likely to use e-texts.

Unlike English literature, people from the fields of law and computing seem to be in favour of e-resources:

I study law thus we, law students, are heavily dependent on online materials as there is so much one has to read.

Generally they're good for computing, which is what I teach. I think that's a combination of the subject – students often want to look up factoids, rather than read a whole essay. They're also used to using screens on a day to day basis.

Conclusions

This is probably the largest LIS survey that has ever been conducted in the UK and possibly elsewhere. The free views of 16,000 scholars cannot be ignored and they raise issues not previously associated with e-books – the importance of "portability" and environmental factors. The two main advantages of e-books for students are: they were

easy to access, which means they can use them at any time anywhere, and their searchability (another form of access, if you like). These two advantages were also highlighted in the study by Chu (2003). The findings also show a big potential market for e-textbooks. Although students seem to favour e-books for pragmatic reasons such as avoiding going to the library, convenience of use, added features such as searching, and copy and pasting are not thought to be sufficiently student friendly. The most inhibiting feature of e-books is the difficulty of reading them from the screen. Printing features need to be improved and there should be systematic plans and programmes organized by librarians for promoting e-books and improving student's information literacy skills in order to get the maximum from e-books.

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