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CASE STUDY

E-books in practice: the librarian's perspective

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ABSTRACT. It has become unimaginable to provide information – particularly scientific information – without e-books. They have become part of today's combination of media, which includes printed books and journals, e-journals, e-books, and databases. When e-books first appeared on the market, librarians very quickly formulated their key requirements. The most important requirement is functionality: it must be possible to look through a book chapter by chapter, and also to get a quick overview of a comprehensive monograph. Usage arrangements, including concurrent usage and use for interlibrary loans, are also important. The use of uniform technical standards increases the acceptance of e-books.

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Introduction

Since the end of the 1990s, the media, publishers, and libraries have been unable to imagine a world without 'e-books'. What was initially conceived of as a technical device – in other words, e-books as hardware, as a reading device for electronically available texts – quickly became a general term for the use of book content in electronic form.

However, with media convergence in scholarly communication, there has been a transition from separate e-books to databases containing both monographs and journal articles, and the boundary between the two is often fluid. The electronic availability of content in all sorts of shapes and sizes has led to a situation in which the classical and familiar boundaries between the different media forms, which were established in the print era, are no longer valid. Books, journals, and databases converge to form a unified electronic medium, which can be reduced right down, in the extreme case, to individual bits and bytes. However, stakeholders in the publishing and library industries still tend to use the terminology and administrative classifications of the print era. This can lead to misunderstandings, to difficulties for publishers and libraries in finding suitable business models, to ambiguities in managing e-resources in libraries, and to absent or inappropriate systems for their administration.

Parallel to the convergence of media is a convergence of actors – who actually does what these days?

> With their offers and their range of services, the various actors in the information context are moving much closer together in the era of online services than was ever thought possible only a few years ago. Publishing houses produce software, universities and journal agents offer full

texts, software firms concern themselves with contents, libraries perform subject indexing and subject information centres archiving tasks . . . and each one of them offers more and more integration services, in other words a conglomeration of everything.[1]

However, libraries have been able to gain practical experience with e-books over the past ten years or so. Numerous studies have documented the usefulness or otherwise of this medium in both teaching and research; however, these have tended to focus on the business models between publishers and libraries.[2–5]

E-books in libraries

As a rule, user expectations can be differentiated from the technical and legal framework for e-book use. While the user wants to have all the functionality that is technically possible for an online publication, irrespective of copyright restrictions, the potential functionality will most likely be constrained by the publishers' particular contractual and business models and distribution chains.[6]

Functionality of electronic publications

The typical range of potential functionality of an electronic publication is summarized in Table 1.

Advantages and disadvantages of e-books

The advantages and disadvantages of e-books can also be easily summarized. The advantages are as follows:

- fast acquisition;
- 24/7 availability;
- Web-like interactivity and search functions;
- fast updates;
- access to and, in some cases, purchasing of individual chapters;
- global availability;
- multimedia elements;
- no deterioration through use.

The disadvantages are:

- dependent on access to the Internet;
- dependent on a technical platform;
- lack of the physical 'look and feel' of the print book;
- reading on screen is not very comfortable;
- lack of individuality compared to a book (size, binding, etc.);
- limited access rights (often no concurrent use or limited user numbers, and no interlibrary loans);
- proprietary systems.

the user wants to have all the functionality that is technically possible

The e-book market is an imperfect one that is still evolving; products and markets are changing rapidly, there is a lack of technical standards, and there are no structures or standards for sales and distribution models.[6]

Pricing and business models are also unusually heterogeneous. Almost no provider offers a simple, straightforward model; starting from pure licensing and ranging up to purchasing or consortial acquisition, all conceivable models that are available in the fields of e-journals and databases also exist in the field of e-books. Usage and licensing conditions vary widely and are not always

Table 1 Functionality of electronic publications

Selectivity	The user can selectively search for and access individual elements of content. Content elements can be extracted from the medium without damaging it.
Interactivity	The user can choose the order and presentation of content elements. Using the bookmark function, the user can mark passages in the text to which he or she wants to return.
Multimedia	Picture, video, sound, and text are digitally integrated into the medium.
Hypertext/hypermedia	Linking of content and structural elements both within and beyond the medium itself to other media. In the information space, the user moves using the navigation function.

the acceptance of new electronic media and the readiness to use them in STM disciplines is particularly high

library-friendly (e.g. interlibrary loans, concurrent users, archiving rights). Whether this is always useful, or whether the nature of a book is fundamentally different from the contents of a journal database or a database, would be the subject of a different article. While scholarly e-books have been available in the United States and the United Kingdom since the end of the 1990s, their introduction to the German market followed later. In 2003, a central German medical library was still talking about the beginning of a revolution brought about by e-books.[7]

A number of studies have been launched in the information sciences to determine usage behaviour and the acceptance of e-books in a university environment.[8–10]

Case study: e-books in the Central Library of Forschungszentrum Jülich, Germany

Forschungszentrum Jülich (Research Centre Jülich) is the largest interdisciplinary research centre in Europe. Its 4,400 staff members address key questions in the fields of energy, environment, key technologies, and medicine. The Central Library, a modern special library in the STM sector, provides scientists and employees at Jülich with all types of literature and information, and offers a wide range of services relevant to science. The Central Library in Jülich subscribed to its first e-journal in 1996. Six years later, it acquired its first e-book (*Römpp Online*, 2002).

Electronic media are widely available in the STM sector; there are a large number of databases, e-journals, and most recently e-books. At the same time, the acceptance of these new electronic media and the readiness to use them in these scientific and engineering disciplines is particularly high. It is against this background, and in light of its positive experience with early e-resources, that the Central Library decided to go e-only in 2005. It was decided to discontinue subscriptions to the print versions of all printed journals for which an electronic version or electronic access was available. The only journals that were subscribed to in print were those journals that offered absolutely no electronic access. The well-structured introduction and the changeover to e-only occurred without any problems, and no complaints were received from the scientists in Jülich. With this experience behind it, the Central Library began to expand its e-book holdings dramatically. In 2006, it subscribed to a large e-book package consisting of 800 titles. Today, thousands of e-books form part of the standard range of literature in the Central Library, alongside print books, journals and other media. The expenditure for e-books as a proportion of the budget as a whole is shown in Figure 1.

Key aspects of e-books

In the course of our day-to-day experience in managing and using e-books, a number of

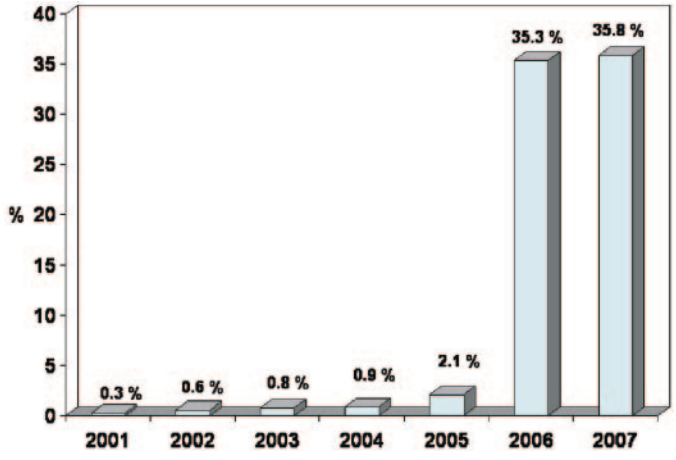

Figure 1. Expenditure on e-books as a percentage of acquisition budget.

key aspects have emerged. All of these can significantly improve the acceptance and functionality of the medium.

Interlibrary loans and document delivery

The distributed provision of literature (in the German library system and internationally), through interlibrary loan/document delivery, works well for print. E-books also need to be available for this purpose. Licensing conditions, however, frequently do not permit the use of e-books for interlibrary loans or document delivery. Publishers need to establish appropriate models so that the co-operative interlibrary loan system can also make use of these electronic media. Unlimited multiple use is a concern for publishers, but models do exist that solve this problem.

File formats

When e-books were first launched, numerous publications appeared on the standardization of formats and contents.[11] The experimental stage with e-books is now over, and PDF, HTML, and XML have generally become established as the standard formats. However, the security of these formats, and their compatibility with standard software and reader systems, are not currently guaranteed, although negotiations are under way to ensure this. Small publishers and academic societies in particular do not always fulfil technical and usability criteria, which can present libraries and scientists with insoluble problems.

Pricing structure

The business models of e-book service providers have become increasingly complex and difficult to understand. Libraries want to see less complex models, with easy-to-follow price structures and fair pricing models. They would like access to e-books not to be restricted to a specified number of concurrent users. All titles should be available singly as well as in large (publisher- or discipline-based) packages. This will become even more crucial as the number and variety of titles increases. It does not always make sense to purchase all of the titles offered in an e-book package, even when library budgets allow this.

Long-term access and preservation

As with e-journals, guaranteed long-term access to, and the preservation of, the content of e-books must be ensured. The two models under discussion are central archiving with remote access, and local hosting. Many small libraries are neither able nor willing to archive electronic content using their own technical means and infrastructure. They are reliant on publishers to guarantee continuing access through an economically independent authority, such as a national library, if the economic activities of a company should cease. Libraries increasingly expect this to be a standard term of e-books licences, just as they do for e-journals.

Cataloguing bibliographic metadata

A library is not just responsible for the acquisition and provision of holdings and information; it also prepares both to make access easy for readers. For this reason, cataloguing is one of the main fields of work in libraries. To help them in this task, libraries expect to receive metadata from e-book providers – both catalogue data for formal cataloguing (data such as author, year, source, size), and elements for defining the contents of a publication, such as keywords or controlled vocabulary. They need to be able simply to import these to their local library system, so that cataloguing, particularly when large e-book packages are purchased, does not lead to a massive backlog. They also need to be able to integrate e-books into the portal software of their libraries. Subject portals often provide scientists and students with their main route of access to subject information. Rather than being isolated in a special 'media corner' as a result of their medium, e-books need to be integrated into the electronic information environment.

e-books need to be integrated into the electronic information environment

Usage statistics

The use of statistics, both for the active management of holdings and for general

operational monitoring, has become standard for electronic media today. Advanced usage statistics are also essential as a management tool for e-books – at the individual title level, or even at the chapter level – enabling the library actively to manage demand.[12]

the e-book will develop further and take up a relatively important position in the provision of scientific information

Conclusions

The use of e-books has become a matter of course in an academic library; it is part and parcel of a professional media mix. The e-book will not only be able to hold its own alongside other media in the future, but will also develop further and take up a relatively important position in the portfolio of the provision of scientific information. E-books will be used for the purposes of science and research; the reader can search through them quickly. However, printed books will not be replaced by e-books – they will always retain the huge advantage that they can be used everywhere without any technological aids.

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