

# Library Hi Tech

## Electronic books: challenges for academic libraries

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### Introduction

This paper, based on three recent research projects, addresses some of the issues that are central to the acceptance and integration of electronic scholarly monographs and textbooks (henceforth referred to as e-monographs) into the academic library. The findings suggest that the almost casual use of terms like 'digital library' and 'hybrid library' belies the reality of a slow acceptance of nearly all digital textual resources other than journals, and a demonstrable lack of *user* take up of most kinds of electronic library-information resource.

In 1998, the authors were funded by the Joint Information Services Committee (JISC) of the Higher Education Funding Councils for England and Wales to undertake an 18-month study of the incidence and nature of publishing of electronic scholarly monographs and textbooks in the UK. This was an eLib MODELS project, the first of its kind and possibly pitched a little ahead of its time (Lonsdale and Armstrong, 1998; Armstrong and Lonsdale, 2000). The literature suggested that there was a higher incidence of publishing activity in North America (for example, De Loughry, 1993 and Freeman, 1993), and Australasia (AVCC, 1996), so the investigation was extended to include data about e-monograph publishing internationally.

The project explored several areas surrounding the structure of e-monograph publishing, that is, the incidence of provision, management structures, costing mechanisms, and authoring and editorial responsibilities. The project also analysed the nature of content for these formats, looking at added-value elements, rights issues, etc. In addition, the study explored some of the implications of e-monograph publishing for those involved in collection management, especially issues of access, by means of a survey of libraries in higher education.

A range of methodological approaches was employed in conducting the research. These included a comprehensive literature search and review; a survey of academic publishers of electronic monographs by means of an interrogation of their Web sites, and case studies were also conducted with selected UK publishers. A separate investigation of the publishers of national bibliographical sources and services was also undertaken using telephone interviews, and UK university libraries were surveyed by means of an email questionnaire.

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Cognisant of the speed of change within this field, especially the appearance of new players such as netLibrary<sup>2</sup>, Questia<sup>3</sup> and Ebrary<sup>4</sup>, developments have continued to be monitored. A follow-up study of British university libraries to ascertain the degree to which they have engaged with the new players, and to update data about e-book provision was begun in Autumn 2000 and is continuing. This investigation is supported by the University of Wales, Aberystwyth (UWA) Research Fund, and a similar methodological approach to the previous project was adopted.

Since October 1999, a completely separate, large-scale JISC-funded project, JISC Usage Surveys: Trends in Electronic Information Services (JUSTEIS) has been managed by the authors and colleagues from the Department of Information and Library Studies at UWA (Armstrong, Lonsdale, Stoker and Urquhart, 2000 and Armstrong *et al.*, 2001). This is a three-year study of the provision and use of electronic information sources (EIS) in higher education and further education in the UK and has *inter alia* highlighted further issues relevant to e-monographs. The first cycle was completed in the summer of 2000 and we are currently concluding the second cycle. The report for the second cycle will be delivered to the JISC in late summer 2001.

In the first cycle, students, academics and library staff in 25 universities were surveyed using critical incident and critical success factors methodologies to ascertain the range and nature of EIS use. Provision of EIS by higher education institutions was also investigated via an analysis of their library Web sites. The second cycle adopted the same methodologies and was extended to include the further education sector.

Although the JUSTEIS work has not focused upon e-monographs *per se*, there are significant findings which relate to access to EIS, and which have resonance for the use of e-monographs in higher education libraries.

There were many dimensions to the research undertaken in the three projects but this article is concerned specifically with three elements: the trends in e-monograph publishing in the UK, the issue of bibliographic control, and facilitating access to publications. The paper draws on data taken from all three projects.

### **PROVISION AND USE OF E-MONOGRAPHS: 1998 AND 2000**

The 1998 study suggested a publishing model in which three discrete sources of publishing e-monographs were identified. These comprised:

- University presses, predominant in North America, many of whom have been led into experimenting with electronic monographs as a result of the fears about the future of the scholarly monograph, that is, in order to make scholarly monograph publishing economically viable (Freeman, 1993).
- Non-university commercial publishers.

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<sup>2</sup> netLibrary: <<http://www.netlibrary.com/>>

<sup>3</sup> Questia: <<http://www.questia.com/>>

<sup>4</sup> Ebrary: <<http://www.ebrary.com/>>

- Specialist publishers. A final category comprised small-scale individual publishing initiatives, again evident both in North America and in the UK. This is typified by academic staff in tertiary education publishing monographs directly on the Web. At the time, one British example was Process Press, established by a member of the academic staff in the Department of Psychology at the University of Sheffield. A set of his scholarly Web monographs had been published using the computing facilities of the University of Sheffield for the Web site.

Both e-monograph projects sampled UK publisher Web sites to determine the degree of electronic publishing. Of the 80 UK publishers of textbooks and scholarly monographs identified in our 1998 study, 23 (29%) were publishing electronic monographs. The most recent survey suggests a slight rise in electronic monograph publishing to 35% (five more publishers) over the subsequent two years. In the 1998 report, we showed that electronic scholarly monograph publishing in the UK was largely by means of CD-ROMs whereas in the USA both media are used more or less equally (Table 1). Of the five new publishers, three were using CD-ROM, one was only "considering options" and only one was Web-based, suggesting that British publishers retain a preference for the CD-ROM format.

	<b>CD-ROMs</b> (%)	<b>Complete Web texts</b> (%)	<b>Other use of Web sites</b> (%)
<b>UK</b>	60.87	8.7	30.43
<b>USA</b>	47.37	42.1	10.53

*Table 1: Publishers' use of Web and CD-ROM for complete scholarly monographs (1998)*

The 1998 survey looked in some depth at the use UK publishers were making of their sites and Table 2 shows (again compared with US use) the percentages offering different levels of access to their publications or different degrees of commitment to the Web.

	<b>Publishers with Complete Texts</b> (%)	<b>Publishers with Partial Texts</b> (%)	<b>Publishers offering Tables of Contents</b> (%)	<b>Publishers offering Sample Chapter</b> (%)	<b>Publishers offering a Synopsis or Abstract</b> (%)	<b>Publishers offering Sample Pages</b> (%)
<b>UK</b>	8.70	56.52	30.43	30.43	47.83	21.74
<b>USA</b>	42.11	55.26	65.79	31.58	57.89	42.11

*Table 2: Publishers' use of Web sites (1998)*

While the nature of the smaller project undertaken in 2000 did not allow a full comparison, it seems likely that these levels of use have not changed markedly. By comparison, Table 3 showing the 'sales' features of publishers sites seems to show that, at least in 1998, the UK was ahead of the USA in making available both catalogues and online ordering.

	<b>Catalogue available online %</b>	<b>Advertisements available online %</b>	<b>Company News ("What's new") online %</b>	<b>Online ordering available %</b>
<b>UK</b>	91.30	4.35	69.57	86.96
<b>USA</b>	76.32	10.53	44.74	55.26

*Table 3: Marketing features of publishers' sites (1998)*

These snapshots of what is available have to be balanced by both what is being offered to user communities and what the users in turn choose to use. Affecting the first are issues of access and discovery, while in the second area, information skills and information 'marketing' play a significant part.

Both of the e-monograph surveys investigated what forms of externally-published electronic scholarly monographs were made available through the library. Table 4 shows the position in 1998 and now. As can be seen, there is very little difference in what is being made available.

<b>1998</b>		<b>2001</b>	
<b>51%</b>		<b>56%</b>	
<b>24%</b>	<b>Diskette</b>	<b>25%</b>	
<b>68%</b>	<b>CD-ROM</b>	<b>72%</b>	
<b>76%</b>	<b>WWW</b>	<b>75%</b>	

*Table 4: UK HEI libraries offering access to e-texts*

Our latest e-monograph study suggests that, to the three-dimensional publishing model outlined above, we must add a fourth source; publishers such as netLibrary and Ebrary that have appeared within the past two years and that look set to make a significant contribution to the e-monograph publishing base. As part of this investigation, we interviewed a senior representative of netLibrary to ascertain the nature of e-monograph provision by the company. It is clear that the initial premise upon which netLibrary is based is the publication of scholarly monographs and textbooks, and although the company is looking at the wider e-book market, the majority of the 30,000 titles from 400 plus publishers are essentially academic in nature. Similarly the projected output of electronic textbook materials from Ebrary, Questia and MetaText can be included in this mode. The huge number of titles made available by these three companies alone currently makes this the dominant source for e-monographs. What is not clear is the precise influence that netLibrary will have upon the activities of the three primary groups of publishers identified above. This issue is to be investigated as a part of our continuing survey.

## **BIBLIOGRAPHICAL CONTROL OF E-MONOGRAPHS**

Access to electronic monographs is of critical importance to librarians engaged in collection management and comprises several dimensions. The first concerns bibliographic control of titles, a matter that has, paradoxically, received scant attention in the international and UK literature on electronic monographs. Our 1998 and 2000 studies sought to investigate the position in the UK with respect to legal deposit and electronic

monographs, and to assess the nature and effectiveness of national bibliographic sources and services in identifying and describing e-monograph titles.

We identified a number of different bibliographical approaches, beginning with the current status of legal deposit.

### **Legal deposit**

The issue of extending the law of legal deposit to non-book materials in the UK is well documented in the literature on bibliographic control (Ratcliffe, 1998). Following a number of attempts in the late 1970s and 1980s to facilitate control over these publications, a major impetus came in February 1997, when the Government published its long-awaited consultation paper, *Legal Deposit of Publications: a Consultation Paper* (DNH, 1997). Whilst the document is concerned to explore arrangements for printed materials, it affords an important opportunity for all concerned with the new technologies to re-evaluate the implications of extending legal deposit legislation to electronic formats which are currently excluded from the *British National Bibliography (BNB)*. In considering the issues surrounding the possible extension of legal deposit to electronic formats, a distinction must be drawn between the two media.

### **CD-ROM**

Ratcliffe argues that there is a case for extending deposit to this medium, since the cost of producing the necessary copies for the deposit libraries would be “marginal”. His view is echoed in both the consultation paper and the British Library's own consultation paper *The Future of the National Bibliography (BNB)* (British Library, 1997). The latter suggests that a set of “subordinate supplements of the BNB” could be produced that might ultimately appear in electronic format – including one specifically for CD-ROMs. In the short-term, it is envisaged that such a publication might be based upon information from publishers or outsourcing of data. In the longer-term, there is the possibility of legal deposit being extended to the format.

### **Web monographs**

In respect of extending legal deposit bibliographic control, Web monographs pose a much greater challenge. Both consultative papers cited above devote comparatively little space to the discussion of Internet publications and underline the extensive problematic issues “which must be resolved before any system of legal deposit could be introduced” (DNH, 1997). Only one European country, Norway, has legislated for the deposit of Internet publications, and as Ratcliffe wryly observes “that legislation leaves much unsaid” (Ratcliffe, 1998). The conclusions drawn in the consultative paper about the extension of deposit to Internet publications, including Web monographs, are sensibly open-ended. They recommend that legislation should be constructed so as to facilitate ultimately the extension of deposit to on-line publications, but “at the present time no regulations should be drawn up to give immediate effect to this possibility” (DNH, 1997).

Following responses to the Government's consultation paper, the Secretary of State for Culture, Media and Sport announced at the end of January 1998 that a working group would be established, chaired by Sir Anthony Kenny and comprising representatives of

the British Library, Legal Deposit Libraries, The British Film Institute and publishing sectors, to consider ways of moving forward on the issue of legal deposit.

With the publication of the Kenny Report, the Voluntary Deposit of Electronic Publications (VDEP) was established in January 2000. Concerned with hand held media only, this has resulted in several hundred CD-ROMs being deposited voluntarily in the British Library. MARC records are created and titles listed in the catalogue and the *British National Bibliography*. The low number of titles deposited means that as yet no separate listing is warranted.

VDEP is a two-year pilot project with formal legislation being a possible outcome. Legislation has been drafted however it is not media specific and there would need to be individual orders in Council for specific types of media. It is anticipated that announcements will be made regarding future legislation following the establishment of the new parliament.

Our 1998 study indicated a preference in the UK for the CD-ROM format, although those publishers anticipating e-book publishing intimated that they would be more likely to use the Web. Over the past 18 months the *international* preference for e-book publishing on the Internet suggests that CD-ROM format may well be displaced which raises the question of the future of legal deposit of Web publications. Since the pronouncements by the DNH in 1997 mentioned above, the British Library's Digital Library Development Programme has come into existence and acts as a repository of online publications. Although their exact nature is not yet defined, this could well offer the context for the control of online books. There is no policy yet as to e-books, but we understand that serious discussions are on-going.

Since the national official bibliography of the UK excludes a high percentage of electronic formats, we explored other forms of control of e-monographs, beginning with the major national trade bibliographies.

### **Trade bibliographies**

The trade bibliographies published by BookData and Whitaker constitute important bibliographic sources for collection management in this country, although there has always been a degree of uncertainty as to their role in capturing non-book materials. Little has been written about this role and thus the data acquired from our interviews with senior personnel of both companies offer unique insights into the bibliographic coverage of electronic formats.

Both companies now include CD-ROM and diskette publications in their databases. However, both do acknowledge that the incidence of titles is low. Neither could say categorically what proportion of titles listed were scholarly monographs, although there was a presumption that it would be small.

BookData databases have the capability to search by a particular medium. Thus, end users who wish to identify CD-ROM titles *per se* have the means of undertaking a search.

One of the impressive qualities of the BookData bibliographies is the amount of annotated information that is provided for specific titles. BookData confirmed that information provided by the publishers of CD-ROM monographs could be integrated in the same way as it is for books. Whitaker revealed that they include annotations to complement the bibliographic data and that they would do so equally for both print and electronic media.

Neither BookData nor Whitaker accommodate Web monographs in their bibliographic databases, although both recognised the inevitability of this, and the capability is probably within their reach. Such an extension would constitute an important means of identifying Web monographs, given the potential difficulties of extending legal deposit to this medium. Until there is a greater impetus from the market however, this possibility is unlikely to be realised.

In 1998, both BookData and Whitaker reported little demand from subscribers for information about electronic monographs, although subscribers' responses to the inclusion of CD-ROMs and computer disks have been positive.

Given the comparatively limited array of electronic monographs presumably available in the trade bibliographies, it was not surprising to discover that there were only a small number of university librarians who choose to select from these sources. It is gratifying, however, that there is some degree of awareness within the academic library sector that trade bibliographies are expanding to encompass CD-ROMs.

### **Publisher sites**

The printed catalogues of publishers remain an important bibliographic source for the evaluation, selection and acquisition of printed books; for certain categories of non-book materials. The evolution of publishers' Web sites theoretically offers another important medium for gaining access to publications, and our surveys of university libraries supported this hypothesis, with a majority of librarians citing publishers' Web sites as the preferred mode of accessing both CD-ROM and Web monograph titles. This, however, is no easy task, since there appears to be no guide to UK (or other) publishers who publish electronically. Indeed, producing such a list constituted the first fundamental and time-consuming task of the first research project.

We are cognisant, however, that with the appearance of netLibrary, bibliographical access to its database and to what is perhaps the largest single array of e-monograph titles, is easily facilitated. We are equally cognisant that there still remains a significant number of e-monographs which are not available through netLibrary. Without doubt, most end users can identify publishers specific to their disciplines and elect to interrogate those sites. However, difficulties arise in locating the smaller specialist publishers, and for those searching broader disciplines, for example the social sciences, a long and unpredictable trawl lies ahead. Admittedly, we have no empirical evidence that end users wish to search for electronic monographs *per se*, however, anecdotal evidence and our own experience support the supposition that a mechanism for locating electronic titles would be welcome.

A second problem encountered concerns the fact that the majority of publishers sites do not differentiate between print and electronic titles, and our researchers found it exceedingly difficult to identify quickly electronic titles.

As we have seen many publishers view their sites as a means of advertising and see their principal role as being to provide catalogues of their publications and there was evidence of some e-book publishers (e.g. Boson) providing bibliographical hyperlinks to other electronic book publishers.

### **Internet E-book suppliers**

Increasingly, the Internet bookshops are entering the e-book market and we are hoping to investigate their role further. However, since our initial survey, a new category of bibliographical source has appeared – Internet e-book suppliers. BookLocker and e-bookAD.com are two such examples, the latter offering access to 12,000 titles in a range of subject fields as well as genre and non-genre fiction. Again, there is a need to investigate these companies and their role in supporting selection and evaluation, in particular, the degree to which they make available scholarly monographs.

### **Serendipity**

One small field of publishing concerns individual initiatives, usually academics who publish directly on the web, and this creates particular problems since they fall outside the bibliographical apparatus. Our study revealed, that a number of the university libraries were not aware of the existence of such initiatives – even in their own universities – an important implication for ILS / departmental rapport. Awareness of such publications is usually the result of fortuitous encounters. Indeed, our survey of university libraries underlined the significance of serendipity and informal resources e.g. publishers exhibitions, “academic grapevine” as a major means of locating titles.

### **New Players**

A further bibliographical dimension of the recent players such as netLibrary concerns their role *viz a viz* legal deposit, and the issue of linking their databases with existing bibliographies, and bibliographical structures. For example, agreements have been reached between netLibrary and Blackwell that all e-book titles held in the netLibrary database are included in Collection Manager, and between netLibrary and R R Bowker for titles to appear in Books In Print, thus offering bibliographical access to libraries who subscribe.

### **National Debate**

Whilst bibliographic coverage of electronic monographs in the UK remains sparse and fragmentary, and end users have no central source to support their searches and must have recourse to a range of sources to trace titles, it is essential that this issue of access is debated nationally. Obviously work is on-going within the British Library, but we believe that this issue should be accommodated within the remit of the DNER e-books Working Group, to ensure coordinated national debate.



## PROMOTING ACCESS WITHIN THE INSTITUTION

Another dimension of access concerns facilitating and promoting access to e-books within the academic institution. The primary aim of the JUSTEIS project described in the introduction to this paper is to investigate the use of EIS by students and academic staff, and the nature of access to these resources. Although the research does not centre specifically upon e-books, this format is accommodated under the generic term EIS.

One major conclusion drawn from the first cycle of our research is the low take up of most EIS. Tables 5 and 6 reveal that subject gateways are notable only for their lack of mention among students and academic staff, and with the exception of some academic and research staff, the use of more sophisticated EIS such as e-journals, Web databases, and Web of Science is also low amongst the undergraduate and postgraduate bodies. Even the use of OPACs appears to decline after the first year with less than a quarter of students making use of them.

EIS	1 <sup>st</sup> year undergraduates (n=102) %	Undergraduates other than 1 <sup>st</sup> year (n=284) %
Search engines	73.53	73.24
OPAC (own institution)	30.39	21.13
E-mail	28.43	23.94
Other Web EIS	22.55	20.77
Local EIS	19.61	14.08
Own HEI Web site	7.84	4.58
Other institutional Web sites	2.94	3.52
JISC negotiated services	1.96	13.38
Databases via Web	1.96	11.62
All e-journals	0.98	3.87
Gateways	0	0

Note: Questionnaires with response 'Internet' have been counted as Search Engines

*Table 5: EIS used in the critical incident search by undergraduates*

EIS	Postgraduate questionnaires n = 178 %	Postgraduate interviews n = 35 %
Search engines	76.40	48.57
E-mail	28.09	8.57
OPAC (own institution)	21.35	20.0
Local EIS	17.98	11.43
Databases via Web	13.48	5.71
Other Web EIS	10.67	54.28
JISC negotiated services	9.55	11.43
All e-journals	3.37	25.71
Other institutional Web sites	0	22.86
OPACs (other institutions)	0	8.57
Own HEI Web site	0	5.71
Gateways	0	5.71

Table 6: EIS used in the critical incident search by postgraduates

There appear to be significant implications here when contemplating the introduction or expansion of e-monographs into the repertoire of library resources. How can we encourage greater take up and structured use of these resources? There are implications for the way they are accessed through library web pages, and there are implications for the information skills programmes currently offered. Although we are not at present investigating deeply this issue, there is considerable evidence that there is uniformly low use of LIS staff and courses that direct students to appropriate EIS. Students appear to perceive academic staff as the first point of contact, should they have problems finding EIS required for assignments or project work, or as the primary medium for general guidance. However, guidance is frequently unstructured, and in general, students may remain unaware of resources, or of how best to use them.

### **Conclusion**

It is evident that the publishing models for e-monographs are subject to considerable change and evolution, and unquestionably the major catalyst here is the appearance of netLibrary. Further work is required to explore how the development of this company will influence the publishing of e-monographs by commercial and specialist publishers. It is also true that bibliographical control of e-monographs remains fragmented, and while one key to a more uniform or coherent form of control, legal deposit, is being scrutinised, a resolution regarding Web publications appears not to be imminent. Once again, the place of the netLibrary model raises new bibliographical issues.

The proven low use of EIS by students and academic staff in HEIs in the UK has significant implications for developing access to e-monographs, especially as this format is new to the e-publishing world and as the nature and the structures of e-monographs are constantly evolving.

The establishment of the DNER Working Group on e-books which brings together representatives of the different players involved – libraries in higher education, publishers, the JISC, researchers in the field – is undoubtedly an important contribution to monitoring, guiding and supporting the development of e-monograph publishing and their take up and use in academic libraries.

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