Research article

Restrictions impeding web-based courses: a survey of publishers' variation in authorising access to high quality on-line literature

Michele Langlois*, Richard F Heller, Richard Edwards, Georgios Lyratzopoulos and John Sandars

Address: Evidence for Population Health Unit, School of Epidemiology and Health Sciences, The Medical School, The University of Manchester, Oxford Road, Manchester. M13 9PT. United Kingdom

Email: Michele Langlois* - Michele.Langlois@man.ac.uk; Richard F Heller - Dick.Heller@man.ac.uk; Richard Edwards - Richard.Edwards@man.ac.uk; Georgios Lyratzopoulos - Georgios.Lyratzopoulos@man.ac.uk; John Sandars - John.Sandars@man.ac.uk

* Corresponding author

Abstract

Background: Web-based delivery of educational programmes is becoming increasingly popular and is expected to expand, especially in medicine. The successful implementation of these programmes is reliant on their ability to provide access to web based materials, including high quality published work. Publishers' responses to requests to access health literature in the context of developing an electronic Master's degree course are described.

Methods: Two different permission requests were submitted to publishers. The first was to store an electronic version of a journal article, to which we subscribe, on a secure password protected server. The second was to reproduce extracts of published material on password protected web pages and CD Rom.

Results: Eight of 16 publishers were willing to grant permission to store electronic versions of articles without levying charges additional to the subscription. Twenty of 35 publishers gave permission to reproduce extracts of published work at no fee. Publishers' responses were highly variable to the requests for access to published material. This may be influenced by vague terminology within the 'fair dealing' provision in the copyright legislation, which seems to leave it open to individual interpretation. Considerable resource costs were incurred by the exercise. Time expended included those incurred by us: research to identify informed representatives within the publishing organisation, request 'chase-ups' and alternative examples being sought if publishers were uncooperative; and the publisher when dealing with numerous permission requests. Financial costs were also incurred by both parties through additional staffing and paperwork generated by the permission process, the latter including those purely borne by educators due to the necessary provision of photocopy 'course packs' when no suitably alternative material could be found if publishers were uncooperative. Finally we discuss the resultant bias in material towards readily available electronic resources as a result of publisher's uncooperative stance and encourage initiatives that aim to improve open electronic access.

Conclusions: The permission request process has been expensive and has resulted in reduced access for students to the relevant literature. Variations in the responses from publishers suggest that for educational purposes common policies could be agreed and unnecessary restrictions removed in the future.

Background

There is increasing interest in the use of web based resources in teaching, including medical undergraduate, postgraduate and continuing professional education, as part of the general growth in e-learning. High quality web based courses should utilise adult learning principles and this requires the learner to access and interact with a variety of learning resources [1]. One of the major benefits of web-based education is that easy access can be provided to up-to date on-line resources including full text journal articles. Some peer reviewed journals are in the public domain and are freely available on the web, others are available electronically on a subscription basis, and some are not provided on the web. Successful development of these courses will be reliant on gaining permission to access high quality sources of information and on reproducing key extracts of published work in teaching materials. This will have special requirements, which differ from currently available support provided by institutional libraries.

We have recently developed a Masters programme in Population Health Evidence (MPHe) at the University of Manchester http://www.mphe.man.ac.uk[2,3] and are using the world wide web to deliver the course material and to facilitate communication among students and tutors. The course is delivered by web pages housed on a secure server and CD Rom. The latter allows students' off-line access to material not requiring Internet connection. Aside from core text book reading, accessing and appraising a wide range of on-line materials, particularly journal articles, is an important feature of the course. We wished to provide direct links ('one click away') to electronically available *core reading* materials like journal articles without students being required to go through the standard search process. The next section describes publishers' responses to our requests to access health journals or other published material and reproduce key extracts in online learning material in the context of developing an electronic Master's degree course.

Methods

There are three broad categories of journal articles classified according to the degree of student electronic accessibility (see below). For off-campus students 'one-click' access will be assured only for category 1 journals. This 'one click away' process may be achieved through access to electronic copies of articles provided on websites or by storing electronic full text papers on a special secure server accessible only to course students. For the latter, permission is required from publishers.

Journal categories by electronic accessibility

1. Freely available direct access journals.

2. Journals which are freely available through institutional subscription, but to which 'one-click' access is not available, since navigation through list of journals and/or volumes, and/or access is controlled by internet address requiring students to connect to the institution's computer network. [The latter is particularly important for web-based courses as many students are not able to utilise campus based facilities and may be technically or financially constrained in their ability to register their computer within the institutional network.]

3. Not electronically available or no institutional subscription available.

Journals may fit into more than one category.

Student access to web based resources in the public domain are not considered further here, as provided the links are kept up to date and due courtesy is offered to the owners of these web sites, permission for access is not required. Among category 2 journals (see above), there are core or 'required' reading materials, essential for the students to access, but which are not available on a 'one-click away' basis. It was for these that we applied for permission to store and make available full text of papers on a secure server. 'Suggested' or 'additional' reading materials which were not freely available, ideally should also be accessible by 'one click', however in view of the magnitude of the task to seek permission for these, we accepted that the usual institutional access mechanisms should be used for these. Finally for category 3 resources (see above) students were provided a paper copy of those resources in the form of a traditional course pack.

To maximise the quality of our core teaching material we also wanted to include key *extracts* from published material such as a quote, abstract, figure or table. These extracts could either exist in electronic or paper form. For web-based teaching whenever an extract from another publication is used in course materials permission is sought since the material on a web based course is considered 'published', even though it may only be shown to a restricted audience.

Thus, during the development of our course we sought permission to provide students access to a number of electronic versions of full text journal articles which were included as core reading but were not freely and directly 'one click' available on the web through our University library (category 2 journals), and also approached a number of publishers about using extracts from published work for reproduction in our core teaching materials.

Having identified the material to which we wanted access, we sent permission requests to *all* the publishers of the

Table 1: Response by publisher to request to provide access to Pdf articles or extracts Pdf electronic articles were stored on a secure server accessed by a link (URL) that was password-protected. Extracts include quotes, diagrams, figures and tables. Both the URL and the extracts were to be included in password protected web pages and the course CD-ROM. Figures in brackets refer to numbers of publishers.

	Number of requests (publishers)	Permission, no fee	Refused	Fee requested	No response
Pdf articles	67 (16)	50 (8)	8 (6)	7 (1)	2 (1)
Extracts	105 (35)	84 (20)	4 (3)	4 (2)	13 (11)
Total	172 (43)	134 (23)	12 (8)	11 (3)	15 (12)

Note: Further detailed information is available on request from the corresponding author.

required material. For journal articles from category two, which constituted core reading and were from journals for which our institution had paid a subscription, we requested permission to store an electronic version (Pdf) on a secure password protected server to which only course students and staff had access. For extracts from published work we wished to replicate and source in our teaching material, we sought permission to reproduce the extracts in materials stored on the secure server and provided to students on CD ROMs.

The following results section distinguishes these two distinct permission request categories by classifying them as Pdf and extracts respectively. Publishers were contacted directly by phone, e-mail (by means of a dedicated permissions, individual or general address), fax or on-line electronic submission form.

Results
Of 16 publishers contacted for permission to provide free access to a full text article, 8 agreed, as did 20 of the 35 publishers from whom permission was sought to include quotes or extracts. Table 1 indicates that we were given permission to provide free access to 50 of the 67 full-text articles (75%) and 84 of the 105 quotes or extracts (80%) for which permission was requested. For the remainder, either permission was refused or a fee was requested. The fees requested ranged from 50 p per student to £15 per student.

Some publishers also asked for authors to be contacted directly, some gave permission for the use of materials on CD-ROM but not on a secure server, and one offered access to their own server (for a fee) as they were unwilling for the Pdf to be stored on the secure University server. Publishers also differed in their instructions about how to cite their material, with some requesting additional information such as a link to their home page or the inclusion of their logo.

There was considerable variation in publishers' response times, ranging from within a day to over six months. Type

of request (Pdf or extracts) or publication from which the material was quoted e.g. book, journal, web pages, had little impact on response time. Similarly, the different methods of contact (email, phone, fax, or on-line request) did not seem to determine response time. However, publishing houses with a well defined web site and a designated permissions section within the organisation were more likely to respond within days.

The proportion of 'successful' responses increased for later requests, as we learned which publishers would be unlikely to be helpful and chose alternative teaching examples from those we knew were accommodating.

The following is a discussion of what we perceive to be implications of this variation in response which are imperative for both developers of educational web-based courses and publishers.

Discussion
Copyright legislation and ease of obtaining permission
The response of publishers to our permissions was highly variable and sometimes restrictive through refusing permission or charging fees. The issue of permission for different types of material is contentious. For instance, abstracts are often freely available through many bibliographic and referencing databases such as Pub Med, but strict interpretation of the law would suggest their duplication requires permission as they arguably represent a substantial part of the body of work. Although we did request permission for all extracts, this may have been beyond legal requirements and the University is currently seeking advice as to what extent this is required in the future. Disagreement over the legal requirement is mainly due to subjective terminology within the 'fair dealing' provision of the copyright law. Interpretation of 'fair dealing' [4] legislation clearly varied between publishers, for example some allowed permission from extracts of less than 150 words whilst others requested substantive fees (over £10 per student) to quote small amounts of text i.e. succinct sentence composed of 15 words. We appreciate that publishers have to cover costs incurred for publishing

material and that producing material in electronic format is likely to have increased costs. However, we would have expected publishers to have 'factored in' these additional costs when establishing annual subscription charges as have the retail store Next who raised their directory catalogue subscription fee after introducing a CD ROM version concurrent with their traditional paper format. A recent Guardian article report substantial increases in journal subscription prices in latter years [5]. Furthermore, some of the fees requested seemed excessive, inflated greatly above current recommendations of 5 p per page per student by the Copyright Licensing Agency's (CLA) [6]. This is likely to be of interest to authors who provide their intellectual work freely for publishers to disseminate to the wider academic community. Ideally, from our perspective, we would like higher educational libraries electronic journal subscriptions to either enable a method to allow simple access to individual articles or if this is not possible the ability to store on the institutions secure server a copy for password protected access by students without incurring additional charges. We recognise that both publishers and institutional libraries work extremely hard when negotiating at protecting each party's interests and to restrict abusive practices but hope that it does not inhibit the future achievement of such agreements.

Incurred resource costs

The procedure to procure permission from publishers utilised valuable resources and was costly not only in financial expenditure but also the associated time allocation for both parties. Many of the larger publishers have designated individuals or sections that are responsible for responding to and granting copyright permission requests. However, in many instances it took us considerable research to locate an appropriate individual/section and find the correct contact details within the publishing house. Much of this could be reduced by clearly signposted permissions sections on web sites, often a first port of call for eliciting information. When amalgamating the total number of communications (approximately 400 for 173 requests) that took place for these permission requests they give a good indication of the considerable time and monetary outlay incurred by both parties which are not immediately apparent particularly as they often utilise existing resources. Furthermore, permission is often grated for one year so this process will be repeated on an annual basis. Much of these resource costs could be minimised for both parties if publishing houses would openly and clearly state, on their web sites and/or publishing material, their current permissions policy for various requests (including teaching purposes) along with contact details for these requests.

Where we were not given permission to provide student access to core teaching material via a secure web site and we could not identify suitable alternatives that were electronically available, we had to send these papers or extracts out in the form of photocopied course packs (consistent with the Copyright Licensing Agency's (CLA) agreement on photocopying [6]). Course packs consisting of photocopied readings can be provided to higher education students unless the material is not covered by the CLA higher education reproduction agreement. This includes any material on the CLA's list of excluded categories, excluded works or material that is greater than 5% (or equivalent) of the complete body of work. The institution bears the costs of photocopying, postage and package of the course pack to the registered students. However, institutional members are not required to pay any additional fees above those already paid by the institution as part of their agreement. The CLA Higher Education Digitisation Agreement differs in that there is only a recommended fee of 5 p per page per copy, in reality though our survey results demonstrate that publishing firms levy considerably higher charges (at least 10 times) than those suggested by the CLA. Despite the best efforts of the CLA, current copyright agreements makes publishing web based teaching material problematic. The difference between pricing recommendations and the prohibitive prices actually levied by some publishers do not bode well for future web based teaching. If publishing firms were to follow the recommended fees proposed by the CLA then institutions would have a greater capacity to *realistically* budget for the likely permission fees when developing web based courses.

As suggested by one of the publishers, it may be more effective for them to offer access to their own server than replicating material on the servers of multiple individual universities at a fee. Given the set-up costs this is understandable although the issue of fees will remain to be solved when universities already pay substantial subscription costs to publishers for electronic versions of journals and within individual departments student numbers may not justify the required expense. Other suggestions by publishers such as controlling by student IP address are not practical for web-based courses where the students may be accessing material from a variety of differing locations. Publishers may have been forthcoming if it was technically possible to generate electronic versions that prevent the printing of material by students. However, this seems to contradict the current higher education digitisation agreement [6] which allows for the printing and storing of a copy for personal use, and could explain why it was not offered.

Predisposition towards available on-line resources

The variation in access to on-line material for educational purposes may introduce bias in medical education, as there may be a tendency for web-based courses providers and universities to favour readily available "one click" resources. The dissemination of original research may therefore be disadvantaged by factors other than its' intrinsic validity and medical or public health relevance. We demonstrated this effect by tending to avoid material from publishers from whom we would anticipate poor response to our requests, based on our early experience. A similar "Full Text On Line" bias that can threaten the visibility of research has been described previously [7]. There are also anecdotal suggestions that authors may prefer to submit to journals that have free direct on-line access to ensure their work is being disseminated to a wide audience. Therefore, publishers that insist in charging excessive fees for accessing individual journals may cause distortions in the academic publication market.

The BMJ has led the medical world in providing full text public access to its journal articles, although the same publisher has a more restrictive policy for other medical journals. Importantly, the BMJ has experienced a steep rise in its impact factor over recent years, which the journal attributes to its "free web access" policy [8]. With the recent announcement that it is shortly to make a charge for access [8] time will tell whether this will have a negative impact on its impact factor.

A number of initiatives have been made to improve access to published research. Organisations, such as HERON, have been established to help academic institutions to provide online access to student readings [9]. However, only a small proportion of HE institutions currently subscribe to the service and we have no experience of its use. As publishers The Public Library of Science (PLoS) [10,11], and Biomed Central [12] charge submission fees, but offer electronic publication of a number of journals, with copyright being held by the authors, not the journal. Direct links to each specific journal piece ensures open access to individual articles to anyone on the Internet via the direct web address thus negating the need to request copyright. The Budapest Open Access Initiative aims to promote open access to peer-reviewed journal literature [13]. The scholarly publishing and academic resources coalition (SPARC) "serves as a catalyst for action, helping to create systems that expand information dissemination and use in a networked digital environment while responding to the needs of scholars and academe"[14]. Nature has joined the debate [15]. After the experiences encountered during this process we encourage and support such initiatives, hoping they prove successful in their worthy goals. Positive media attention [5] should benefit and disseminate information about these initiatives to a wide audience, increasing general acceptance and use amongst the academic community.

Conclusions

Due to restrictions imposed by some publishers there was reduced access for students to relevant literature, despite the excellent support provided by the University Library, which is committed to being in forefront of the provision of electronic academic literature. A great deal of time by the course developers was also dedicated to securing permission from other publishers. Institutions developing web-based courses should benefit from being aware of some of the problems that we encountered. The variation in the response of publishers, and the problems of accessibility of material on an electronic course, suggest that medical publishers should re-consider their policies on access to their materials for educational purposes. Publishers of medical research should agree common policies and remove unnecessary restrictions and delays such that process is streamlined and that material can be made available in a similar way to providing hard copies through use of secure servers for Pdf (subject to agreement over appropriate security safeguards to prevent distribution beyond course members). Publishers should also examine the appropriate response to requests for access to this material in the context of educational activities.

Web-based learning is expected to expand over the next few years, especially in medical education [16]. Our experiences have immediate relevance to all providers of web-based teaching since these developments will be severely limited unless the issues related to granting permission to on-line resources are quickly resolved.

Summary

• Easy access to on-line published material is important for high quality web based education

• In developing a web based Masters course in Public Health we noted a large variation, and numerous restrictions, in responses by publishers to requests for secure restricted access to on-line material

• Permission for free access was offered by 8 of 16 publishers for full text articles and 20 of 35 publishers for quotes or abstracts on request

• Publishers of medical literature should agree common policies and remove unnecessary restrictions on educational institutions to provide secured direct access of on-line learning material

Competing interests

None declared.

Authors' contributions

RFH originated and drafted the manuscript. ML undertook the survey and analysed the responses. RE, GL and JS assisted in the interpretation and discussion of findings. All authors read and approved the final manuscript.

Acknowledgements

References

1. Sherron GT, Boettcher JV: **Distance learning: the shift to interactivity.** In *Professional Series. Association for Management of Information Technology in Higher Education Colorado* 1997, **17:**.
2. Edwards R, Heller R, McElduff P, McDevitt M, Humphrey A, Papashinopoulos C: **University of Manchester MPHe – A Web-based Masters in Population Health Evidence.** *Internet Journal of Public Health Education* 2002, **4:**22-33.
3. **Masters in Population Health Evidence (MPHe)** [http://www.mphe.man.ac.uk]
4. Her Majesty's Stationary Office: *Copyright, Designs and Patents Act – London* 1988, **48:**.
5. Adam D: **Scientists take on the publishers in an experiment to make research free to all: New academics' journal launched in challenge to multinationals.** *The Guardian* 2003, **6:**3.
6. **The Copyright Licensing Agency Ltd** [http://www.cla.co.uk/index.html]
7. Wentz R: **Visibility of research: FUTON bias.** *Lancet* 2002, **360:**1256.
8. Delamothe T, Smith R: **Paying for bmj.com.** *BMJ* 2003, **327:**241-242.
9. **HERON** [http://www.heron.ingenta.com/]
10. Eaton L: **"Free" medical publishing venture gets under way.** *BMJ* 2003, **326:**11b.
11. **Public Library of Science** [http://www.publiclibraryofscience.org/]
12. **BioMed Central** [http://www.biomedcentral.com]
13. **Budapest Open Access Initiative** [http://www.soros.org/openaccess/index.shtml]
14. **SPARC – The Scholarly Publishing and Academic Resources Coalition** [http://www.arl.org/sparc/home/index.asp?page=0]
15. **Nature Debates: Future e-access to the primary literature** [http://www.nature.com/nature/debates/e-access/]
16. Sandars J: **e learning: the coming of age.** *Education for Primary Care* 2003, **14:**1-5.

Pre-publication history

The pre-publication history for this paper can be accessed here:

http://www.biomedcentral.com/1472-6920/4/7/prepub