

Are they open yet: the impact of Open Access Publishing on Research Libraries?

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Abstract

All universities have a clear view as to how they must develop. In terms of research, electronic delivery is now embedded for researchers and access from the desktop is taken as a given. However, in terms of e-Learning, most students still do not feel that this mode of delivery is important. Open Access has the power fundamentally to change the way that Society functions. There are, indeed, two routes to Open Access and, in terms of institutional repositories, a considerable amount of development work is underway to embed this mode of delivery into patterns of academic research.

Overview

The purpose of this paper is to assess the impact of the Open Access movement in research libraries, and research-led institutions, in the United Kingdom. The paper will attempt to do this by looking at the institutional landscape, study the user as researcher and the student as learner, venture the concept of the empowered citizen, assess the impact of Institutional Repositories and come to a conclusion which helps to answer the question, which is the title of this paper.

Institutional Information Landscape

Institutions have a clear idea of what they expect from libraries and information provision. Higher Education (HE) in the United Kingdom is a highly political topic. The introduction of top-up fees into Higher Education provision had underlined the market forces which now provide a dynamic context, along North American lines, in which universities have to act.

In this environment, universities are increasingly competing for funding, philanthropic giving, ratings and students. Supporting the student experience is now a key element in any institutional strategy. The diagram below shows a typical

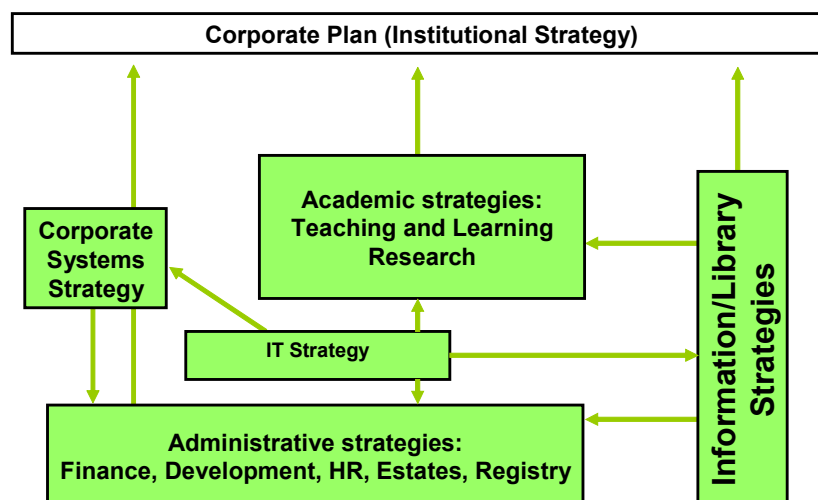


Figure 1: The Institutional Information Landscape

arrangement for a hierarchy of institutional strategies in a UK university. At the heart of the process lie the academic strategies for academic institutions are not driven by profit motives, they are driven by sound academic principles. Hence, the academic strategies for learning, teaching and research lie at the heart of the institution. Depending on the nature of a university's outreach, strategies for learning and teaching will be more or less important than the research strategy. These strategies support the overall institutional corporate plan. Other strategies feed into, and are themselves fed by, the academic strategies and **all** strategies exist to support the corporate plan. There are a host of supporting strategies. These include strategies for the administrative parts of the university (Human Resources, Finance, Estates), for Information Technology, for corporate systems, and for information and library provision. All these strategies should be nested together and, in a well-run universe, will support the institutional strategy in the form of a corporate plan. It is important that libraries and information are recognised in this way. The presence of Information and Library Strategies forms a vital building block in delivering on a university's Mission and Vision, as encapsulated in the corporate plan.

In the context of a Library/Information Strategy, the serials crisis is an important element in the landscape. Subscription prices for periodicals rise at a far higher rate than the ability of libraries to pay them. The JISC Journals Working Group funded a study looking at a variety of models – from the Big Deal to the Pay-per-View model.¹ The UK does not purchase serials, via the JISC Journals Working Group, as a true purchasing consortium, where the amount of money to be spent is known in advance of negotiations. Rather, the UK operates an opt-in model, where a deal is negotiated with a publisher and the community then invited to indicate whether, at an institutional level, they will buy-in to the deal. This is not the best way to negotiate big serials packages, and the report *Business Models for Journal Content* rightly asks whether North European models in Scandinavia are not helpful in moving the debate on in the UK to full consortial purchasing, which should offer better value for money. This recognition in the Report, by rightscom, is timely. The UK does need to look again at the purchasing models it is using if it wishes to deliver value for money and the content which will feed the institutional diagram in *Figure 1*.

The user as researcher

JISC also commissioned a study on usage statistics by evidence base at the University of Central England.² The report found that old universities request more full-text documents than new universities. Given their research-intensive work, this is perhaps not surprising. This was the only distinguishing feature between types of universities. The total number of requests by users is increasing and provision in Science, Technology and Medicine is the dominant subject area. The costs of requests per user is broadly similar in all libraries for subscribed and unsubscribed titles. A small number of titles accounts for a large percentage of the total titles used. The additional costs of acquiring all titles in a bundle results in low costs per request for unsubscribed titles. While none of this is very surprising, the Report does underline how prevalent e-provision now is at an institutional level to support research in Science, Technology and Medicine.

The student as learner

While the scientific and medical researcher is well provided for in terms of research materials, is the same true of the learner? The suggestion of this paper is that E-Learning is an Emperor with no clothes. No-one knows what E-Learning actually means and very few universities have invested heavily in e-learning provision. The architecture diagram in *Figure 1* may well suggest that E-Learning

¹ See http://www.jisc.ac.uk/coll_jiscejournals_jwgs.html.

² Linked at the same URL http://www.jisc.ac.uk/coll_jiscejournals_jwgs.html.

needs to be embedded in the corporate plan, but very few universities have managed to achieve this in practice. This is especially true, this paper suggests, in the old research-led universities.

UCL student survey 2000

Survey Results digram (full size)

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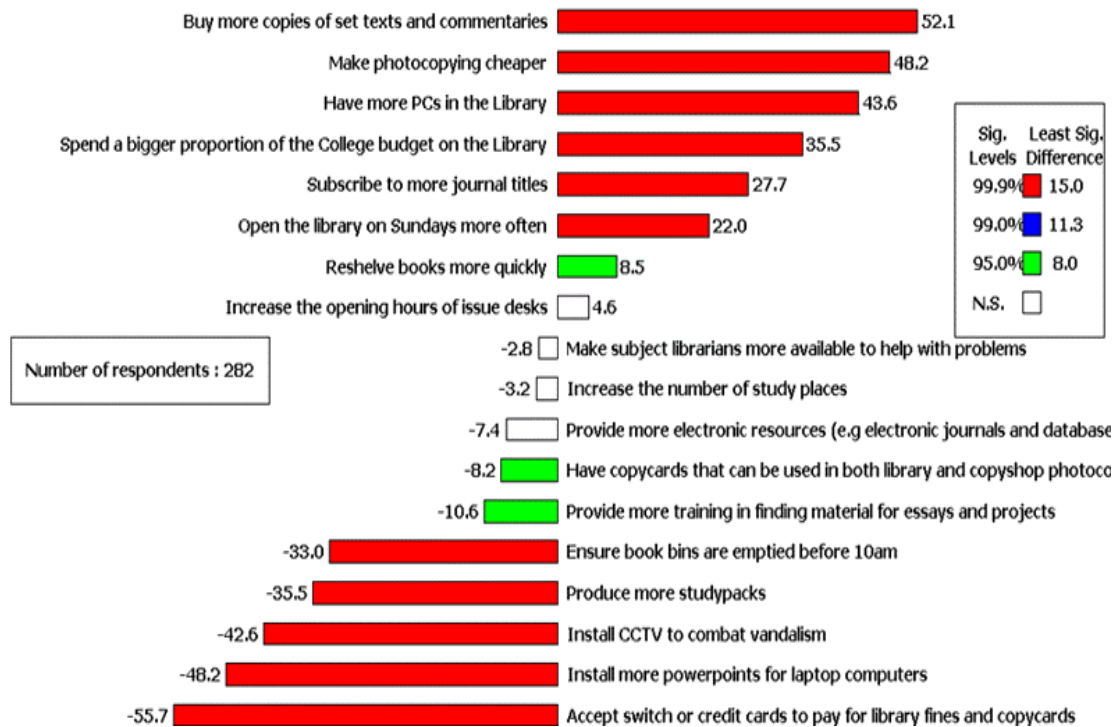


Figure 2: User Survey in UCL (University College London)

In 2000, UCL (University College London) ran a user survey amongst a random sample of taught-course students. The Library software for this survey from Priority Search was the Libra software. The umbrella question, which guided the survey, was 'How can UCL Library Services be improved?' The Table in Figure 2 gives the overall results of the survey in ranked priority of importance, which the students assigned to each development. Graphical bars stretching to the right of the central axis in the Table show increasing levels of significance. Bars which stretch to the left of the axis shows increasing levels of 'non-significance'.

The most significant request which students had was this: 'Buy more copies of set texts and commentaries'. That is, the students' perception of the most important need was for greater provision of paper copy. It has nothing to do with digital delivery. It is true that the survey is relatively old – undertaken in 2000 – but little has changed in the intervening period.

One of the most significant things which Figure 2 tells us is that E-Learning is like Conan Doyle's dog in the night that did not bark. The option to produce more study packs – in either paper or digital format (UCL Library Services can do both) – is ranked as very low indeed on students' wish list. There is, then, no great demand from students for e-learning products. Their main concerns were and still are with conventional paper delivery of taught-course materials. It is a sobering realization how little headway E-Learning has made in academic culture across the UK. E-Journal provision to support research is embedded. Does the community need to

undertake more work on the advantages/disadvantages of E-Learning and look at products which meet these specialised needs? This paper contends that it does.

The 'Empowered Citizen'

One of the exciting trends in Information provision is the move to Open Access. Open Access is a movement with many meanings, but perhaps the starting point of any quest for a definition is the Bethesda Statement, born in 2003.³ The Bethesda Statement revolves around two insights:

The author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship, as well as the right to make small numbers of printed copies for their personal use.

Here, the emphasis is on Intellectual Property Rights, the rights of the producer of the research and the free dissemination of that research output. The second theme of the Statement concerns dissemination of that output:

A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in a suitable standard electronic format is deposited immediately upon initial publication in at least one online repository that is supported by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving...

In the Open Access model, there are no such things as subscriptions to journals. Subscriptions are barriers to access where individuals and libraries cannot afford to subscribe. Those supporting the global Open Access movement have a vision of a world where the highest quality information is free at point of use over the Internet. The vision has enormous political, social and economic implications. Citizens of every country, regardless of their ability to purchase access to information products, would have free access to the world of research outputs.

Information is power and, in an Open Access world, the individual is fully empowered to make decisions and to undertake courses of action based on the highest quality knowledge base. It is a very powerful vision with the researcher and the citizen at its heart.

There are a number of drivers which are helping to deliver this scenario. The role of research funders is vital in this respect. The Wellcome Trust in the UK has been exemplary in leading the way as a major funder of biomedical research and has issued a statement in support of Open Access, the first in the United Kingdom to do so.⁴ The Trust has also commissioned reports on *Costs and business models in scientific research publishing* and *An economic analysis of scientific research publishing*.⁵

Perhaps an even bigger driver for change is the recent work at the National Institutes of Health in North America.⁶ The NIH has recommended deposit of its

³ See <http://www.earlham.edu/~peters/fos/bethesda.htm>.

⁴ http://www.wellcome.ac.uk/doc_WTD002766.html.

⁵ Both reports are linked at <http://www.wellcome.ac.uk/node5210.html>.

⁶ See <http://www.nih.gov/news/pr/feb2005/od-03.htm/>.

funded research outputs in an Open Access repository within 12 months of publication. As the *Economist* commented:

The NIH's decision represents a big change. The \$30 billion that it spends on research each year leads to the publication of around 60,000 papers annually--some 11% of the total published in the medical field. Indeed, the organisation says that its actual impact is much higher, with 30-50% of the most important papers (the ones that get cited extensively by other researchers) having had NIH sponsorship (Economist.com 10/2/2005)

Institutional Repositories

There are two routes to Open Access – Open Access Journals and Open Archive repositories. At the time of writing, the Directory of Open Access Journals at Lund in Sweden lists 1545 Open Access Journals.⁷ In Open Access Journals, the costs are transferred from libraries and their subscriptions to researchers, who are charged for the submission or publication of their article. Access by users is completely free, because the costs of publication are borne by the author. This is why this business model is often called the 'author pays' model. In fact, this is a misnomer because it is not the author himself/herself who pays, but the funder. The Wellcome Trust, for example, has agreed that authors can include publication costs in their research grant applications. Research Councils UK, at the time of writing, are about to publish a major policy statement on the dissemination of their funded research outputs. As part of this statement, it is expected that RCUK will meet the cost of publication charges for publishing in Open Access Journals as a part of Full Economic Cost recovery.

The second route to Open Access is via Open Archive repositories. Open Archive repositories are fast becoming a feature of the global Information landscape. The activity of depositing a copy of a published paper in a local repository is sometimes called 'self-archiving'. Repositories can be either subject-based, such as arXiv,⁸ for physics, mathematics and computer science or institutionally-based.

Deposit in such repositories does not replace traditional commercial publishing, but rather complements it. Many commercial publishers allow deposit in an Open Access repository alongside publication in a commercial journal. The SHERPA Romeo listing⁹ currently analyses the copyright policies of 111 publishers. Of these 111 publishers,¹⁰ 47% of them allow the archiving of pre-prints and post-prints (defined as the final draft post-refereeing), 19% allow the archiving of post-prints only, 6% allow the archiving of just pre-prints and 28% do not formally support archiving. In other words, 72% of publishers allow some form of self-archiving.

A major development in the UK information landscape has been the development of the SHERPA project (Securing a Hybrid Environment for Research Preservation and Access).¹¹ This project, funded by the JISC¹² and CURL (Consortium of Research Libraries)¹³ is having a major effect in transforming the Information landscape for UK researchers. 18 universities have created Open Access repositories under the SHERPA banner;¹⁴ two further partners are the British Library and the Arts and Humanities Data Service. The SHERPA repositories typically store

⁷ See <http://www.doaj.org>.

⁸ See <http://arxiv.org/>.

⁹ See <http://www.sherpa.ac.uk/romeo.php>.

¹⁰ See <http://www.sherpa.ac.uk/romeo.php?stats=yes>.

¹¹ See <http://www.sherpa.ac.uk/>.

¹² See <http://www.jisc.ac.uk/>.

¹³ See <http://www.curl.ac.uk/>.

¹⁴ Listed at <http://www.sherpa.ac.uk/contacts.html>.

pre-prints or post-prints of research articles. In an Open Access environment, these repositories are called Data Providers.

How can these repositories be searched? This is done by OAI Service Providers. The Service providers use the OAI-PMH (Open Access Initiative – Protocol for Metadata Harvesting) to harvest the metadata (usually qualified Dublin Core metadata) from the Open Access repositories, which are OAI-compliant. Using these search engines, users can access the full-text of the articles (typically in .pdf format) from any Open Access repository from which the Service Provider harvests the metadata. OAISTER is such a service¹⁵ and my original PowerPoint for the talk given at the Leslie Morton Conference, for which this paper is the formal version, can be found indexed there.

The OPENDOAR project,¹⁶ funded by CURL, JISC, SPARC Europe¹⁷ and OSI,¹⁸ is a collaboration between SHERPA and the Directory of Open Access Journals at Lund. The aim of this project is to list and catalogue all the academic-based open access repositories anywhere in the world, with a principal aim of enabling service providers such as OAISTER to index top-quality research output, or to identify subject clusters of such repositories.

A further layer of sophistication lies in the work which SHERPA is undertaking with the Arts and Humanities Data Service to add true digital preservation to repository services. Digital curation or digital preservation is a difficult concept, but it refers to the long-term archiving of digital content, as opposed to digital archiving, which usually means the act of storing material on a server. For the electronic environment to supplant paper-based delivery of research and learning materials, users have to be guaranteed that they will have long-term access to digital content. In a paper world, libraries act as archives. Librarians know that a book placed on a shelf can be accessed and read in 50 or 100 years time. The same is not true of digital material stored on a server. The SHERPA-DP (SHERPA-Digital Preservation) project aims to test an architecture in a repository environment which can deliver digital preservation.¹⁹

Conclusion

All institutions have a clear view as to where they want to be. In terms of research, electronic delivery is now embedded and access at the desktop is taken as a given. However, in terms of e-Learning, most students still do not feel that this mode of delivery is important for them. Open Access has the power fundamentally to change the way that Society functions. There are, indeed, two routes to Open Access and, in terms of institutional repositories, a considerable amount of development work is underway.

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¹⁵ See <http://oaister.umdl.umich.edu/o/oaister/>.

¹⁶ See <http://www.opendoar.org>.

¹⁷ See <http://www.sparceurope.org/>.

¹⁸ See <http://www.soros.org/>.

¹⁹ See http://www.jisc.ac.uk/index.cfm?name=project_sherpa2.