Access to Core Course Materials Project

Recommendations and conclusions to be presented to SCILTA

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Introduction and context of project

The Access to Core Course Materials Project was undertaken jointly by Library Services and the Education and Professional Development Department. The Project ran for 18 months, beginning in July 2000. It explored the feasibility of improving access to core teaching materials using electronic delivery and considered whether traditional teaching support services provided by Library Services could be expanded to include electronic materials.[1]

The project aimed to develop UCL's use of traditional and electronic study packs and examined the feasibility of creating an electronic course materials service. One of the key objectives of the project was to produce costed recommendations about the feasibility of implementing a new service. These would be presented to the Sub Committee on Learning, Teaching and Assessment (SCILTA) at UCL. This document sets out recommendations, with relevant evidence from the project, and includes the associated cost and resource implications.

The Research

The recommendations are based on 17 months of sustained research activity. This has included an external review, a needs analysis of academic departments at UCL, case studies of course materials systems, practical experiments to produce electronic study packs and the establishment and evaluation of a pilot service. While the operation of the pilot service significantly shaped the final recommendations which follow, all phases of the research were important. Earlier stages of the project largely determined the nature of the pilot service. In particular the needs analysis identified key features that departments would consider useful, and the external review highlighted similar projects at other academic libraries. Both the practical experiments and the pilot service provided evidence of how these activities might work in practice at UCL and in particular how they might be integrated into existing structures.

Recommendation 1

It is recommended that Library Services should establish a new electronic course materials service that delivers documents to students

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[1] Library Services currently provide a printed study pack service and a short loan collection of journal articles and book chapters known as the Teaching Collection.

via a secure website. This service should be integrated into the Library's existing teaching support activities to include the preparation of both print and electronic resources.

The printed study pack service and printed teaching collection should continue to exist and for the time being run in parallel to the electronic service. Whilst the electronic service will become increasingly important and may eventually require more library time than the paper service, both services will be needed for the foreseeable future.

The needs analysis demonstrated academic departments require a new service to help them improve access to electronic course materials. Academic staff increasingly find it necessary to distribute electronic course materials to students. Often, for reasons of copyright, it is necessary to distribute materials via a secure website, rather than making documents publicly available. A centrally managed service would be more cost effective and efficient than each department setting up their own system. Furthermore, academics find it time consuming to construct and maintain electronic resources, and it is not an area in which they have expertise. Meanwhile, at other academic libraries, staff are increasingly becoming involved in managing and preparing electronic course materials, because of their expertise in areas such as copyright law. At UCL, Library Services has been involved in providing teaching support services for printed materials and have extensive knowledge of copyright law. Academic departments found teaching support services highly useful and regarded the electronic service as a valuable extension of this work. The costs and resources associated with this new service are discussed in detail in the following recommendations.

Recommendation 2

The electronic course materials service should include a copyright clearance and digitisation service for core reading materials. It is recommended that copyright clearance of digital texts is undertaken by staff in-house within the Subject Support Unit. However, digitisation work should be out-sourced to the HERON Service.

Full text digital core reading materials can be obtained utilising a combination of existing staff skills and out-sourcing work. The project found that the process of obtaining copyright clearance for digital readings is identical to that of printed materials. It is often quicker and cheaper to obtain permission in-house either by contacting the Copyright Licensing Agency (CLA) or publishers direct, rather than out-sourcing this work to HERON (Higher Education Resources ON-demand).[2] The Subject Support Unit can obtain digital clearances alongside requests for printed study packs and teaching collection items, using their existing contacts with the CLA and publishers. However, the research found that in-house digitisation of reading materials was extremely time consuming and required specialist equipment and expert technical staff. It is therefore recommended that digitisation work is out-sourced to HERON, who provide a cost effective service.

Cost / resource implications:

In order to run this service the following costs / resources would apply:

- HERON Subscription fee: £1000 per annum

- Copyright permission charges: (Average rate of 5-10 pence per page per student)

- HERON Digitisation fees (Average £20 per item)

- File store space and back-up facility for digitised materials (purchase of designated server) estimated cost based on purchase of DELL Poweredge 1300 server, 2X 9GB Hard disk: £2000. Plus associated staff support time from Information Systems (See Recommendation 7).

Recommendation 3

The new service should also include in-house produced course materials. A limited digitisation service will be available for text and images that are only available in hardcopy; however, wherever possible, academic departments should provide these materials in electronic format. Documents can be distributed in a variety of formats, however certain file types, such as sound and moving image, cannot currently be accessed by students using the managed service.

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[2] HERON offer a copyright clearance and digitisation service for core readings, to subscribing higher education institutions. The service can also be used to obtain copyright clearance only, or to undertake digitisation work only.

Academic departments wanted to include in-house produced course materials in the new service, such as lecture notes, images and general course information. Academic staff are reluctant to distribute teaching materials from departmental websites, as these materials would be publicly accessible. They also may not have the required skills to do this. Furthermore, some departments would rather provide access to in-house produced materials that do not incur copyright charges. Experiments revealed that material could be distributed from a secure website in any format, or converted to PDF where appropriate. Simple scanning of material not in electronic format could also be undertaken with a relatively inexpensive good quality scanner. However, when academic departments provided materials in electronic format, the process of adding the material to the site was unproblematic and took a minimal amount of staff time.

Cost implications

In order to include in-house produced documents in the service, the following equipment would be required:

- Non-managed PC with internet access to run Microsoft Office, Adobe Acrobat Suite (Exchange, Distiller, Capture etc) and image manipulation software (e.g. Adobe PhotoShop)
- File store space and back-up facility to store in-house materials (For costs see Recommendation 2)

In addition to this, a basic in-house digitisation service would require:

- Scanner (Suggest Fujitsu scanner SP15C $995)
- Staff time to operate scanner

Alternatively dedicated staff time to enable digitisation of such item by Media Resources (See Recommendation 7)

Recommendation 4

The new service should have a range of functions including:

- **Monitoring the use of materials on the course material site, in particular to identify any problems viewing and printing large files**

- **Providing a general advice service for departments developing and using electronic course materials and developing a centre for expertise in the College;**

- **Working with appointed representatives from participating departments to meet their teaching support needs;**

- **Maintaining a list of useful contacts throughout the College and externally to whom individuals needing more specialised advice could be referred;**

- **Collecting information about copyright fees that specific publishers charge for digital copies. This information would be made available to academic staff on the electronic course materials web site.**

- **Undertaking promotion and out-reach work about the role of the Unit and the new services being offered to academic departments. For example, this might include running a workshop to examine digitisation and copyright law or good practice when creating electronic course materials.**

The research, particularly the needs analysis, found that departments required advice and support when creating electronic course materials. Academics were often unclear about copyright law, and where they could get advice about this issue. They also expressed considerable surprise at the high amount some publishers charge for digital copyright permissions. The pilot service demonstrated the importance of working closely with academics to provide access to reading materials at a reasonable cost. This sometimes involves substituting an item from one publisher for another reading which cost less, or putting an item into the printed reserve rather than incurring a high fee for digitisation.

Cost / resource implications
- See Recommendation 6 and 7.

Recommendation 5

In order to run the service it is necessary to create a new academic-related staff post at Assistant Librarian level with responsibility for electronic collections and teaching support. This post would:

- **Manage the electronic course materials service;**
- **Liase with academic staff over the most cost effective way to provide electronic course materials to support teaching and learning at UCL;**
- **Liase with staff across EISD, particularly concerning any learning technology initiatives or teaching support services;**
- **Liase with staff in Library Services (specifically Subject Librarians and the Electronic Journals Administrator) in order to exploit existing subscriptions to electronic resources;**
- **Answer any general enquiries and advise academic staff about matters relating to copyright, particularly digital copyright;**
- **Promote the electronic course materials service across UCL.**

The introduction of a new service in Library Services represents a significant increase in activity and responsibility cannot be undertaken with existing staffing levels. It is recommended that this post is created at Academic Related level because of the wide range of skills such a person would need. These would include: a high level of IT skills, including web page and database design; practical experience of digitisation; knowledge of copyright law, in particular relating to digital texts or electronic reserves; knowledge of virtual learning environments or other courseware packages; and experience of dealing with academic staff and other senior members of staff. They would also need experience of organising workshops or giving presentations to staff to promote the new service across college.

Cost implications
1 Full-time Academic Related 1/2 Assistant Librarian Post: £28102 per annum
(including on-costs)

Recommendation 6

In order to run the electronic service effectively and continue providing printed teaching support services, a new Library Assistant post should be created to work full time in the Subject Support Unit. This is a separate appointment to the Assistant Librarian and the post will provide clerical support for the electronic and printed service. Duties will include answering routine enquiries about the service, dealing with

copyright permissions, and processing material submitted to the electronic service.

Experiments revealed that many of the routine clerical activities associated with providing an electronic service, such as copyright permissions and dealing with requests from academic departments, could be integrated into the existing work of the Unit. However, the Subject Support Unit is currently working to full capacity dealing with the existing printed service, and additional clerical support would require a new member of staff. Because of the specialised nature of the work in the Unit it would be important that the postholder was based here full-time to build up a working knowledge of the service and aspects such as copyright law.

Associated Costs / Resources
1 X full time Clerical Related Library Assistant: £17,112 (including on-costs)

Recommendation 7

The service would require technical support from both the IT Services section of Library Services, Information Systems and Media Resources.

- **The new member of staff would need to work closely with the IT Services staff, in particular to liase over the digitisation equipment necessary to run the service;**

- **A designated contact in Information Systems would be necessary to support the service and ensure that course materials in a variety of formats could be delivered to students in Cluster Rooms, and that an adequate file back-up was available;**

- **A contact in Media Resources would be available for advice and assistance with digitisation work, particularly concerning images.**

The project highlighted the need for designated IT support if a new service was established. It would be unrealistic to expect the new Assistant Librarian to run the new service and provide this level of support. Moreover, in order to ensure the new service integrated with existing computing systems it was important to liase with IT staff. During the pilot project is was necessary to make the electronic course materials system available from the Library web site. Further integration with library systems might also be possible, such as making electronic resources available from the library

catalogue. The new Assistant Librarian would need to liase closely with Information Systems to consider the implications of the new service, such as an increased level of printing, and the availability of software in cluster rooms. The facility to play sound and video files in cluster rooms would be important, as departments increasingly wanted to make these types of files available. The costs and resources associated with this recommendation is largely staff time from Information Systems and Media Resources and will be dependant on the level of support they are willing to provide.

Recommendation 8

Within the first year of operation a full review of the new service should be undertaken by Library Services to monitor demand from academic departments and student usage. Following this review, the service should be upgraded to become a database driven web service, using either an in-house built system or designated electronic reserves software, such as ERes. Staff in Library Services, Information Systems and Management Systems Division should make the decision about which system should be developed. However, the database should enable:

- **Sophisticated document management techniques for electronic reserves;**
- **The facility to monitor students' use of the materials;**
- **A search facility to improve access to material in the electronic reserve.**

Library Services would also investigate how electronic course materials could be integrated into the Library Management System.

During the pilot phase the service used static web pages with hypertext links to the electronic resources. This system could be developed quickly, cheaply and with relatively low technical capabilities; however, it was recognised that it was not scalable if demand for the service grew significantly. The pilot service organised resources by department and subdivided them by course titles, but essentially they were presented in an alphabetical list. Once there were around twenty resources on a page, it would become increasingly difficult for students to locate specific materials.

It was also difficult to manage resources that were presented in this way, particularly when documents needed to be removed from the site by a certain date. A number of electronic reserves software packages are available to help manage such resources. Alternatively a web based database could be developed in-house; however this would require input from Management Systems Division and may be more expensive than using an off the shelf package. It would also be important to further investigate whether the service should be integrated into the library management system, and how this might be achieved given that experiments to date have found the Reading List Module of Aleph unsatisfactory.

The ERes package was investigated in some detail as this is currently the market leader in this field. It has a number of features that would be extremely valuable, including being easy to use, integrating with the library management system and offering a statistics package that enables the generation of reports on system usage, and document level and course-level passwords to control access to copyright-protected materials. There are also a number of Copyright Management functions in ERes, so bibliographic information can be stored in the database, letters to publishers and rights holders can be generated automatically, and a powerful set of reports and tracking summaries can be created. This package is mainly targeted at US academic libraries so a full investigation of its suitability for the UK would be advised. However, it would offer a far greater number of functions than an in-house built database.

Cost / resource implications

Purchase of an electronic reserves software package (ERes)

> $5,000 one time setup, customization, and installation fee
> $4,700 ERes annual fee (for the student population of 15,000)
> Server to run software (See Recommendation2, estimated £2000)

In-house development of a basic database:

- Staff training in database design and databases on the web: £350
- Approximately 15 days of staff time (Academic Related 1) to create a very basic Access database to manage electronic resources, and mount it on the web with static HTML. (15 X £219 = £3285)
- Additional staff time to produce a searchable database using dynamic HTML (6 X £219= £1314)
- Further advice from MSD / IS involving staff time

- Maintenance costs of database

Integration with library management system:
- Library staff time to link resources from catalogue records

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Recommendation 9

The new service should be compatible with any virtual learning environment or courseware software, e.g. WebCT, that is licensed and recommended for use at UCL. However, any software package approved and licensed for use on the UCL network would require designated full time support. This support, as with all software on the managed system, comes under the remit of Information Systems and would not become the responsibility of the Subject Support Unit and the new service.

The project compared the distribution of electronic resources using the in-house built system and the VLE package, WebCT.[3] The WebCT site built for the Department of Paediatrics and Child Health distributed a range of course materials and was also used for online assessment. VLEs provide a complete course environment with tools such as communication functions, the facility to submit assignments and undertake online assessments. However, when compared to the in-house built system, it was more time consuming to add resources to WebCT, which need to be uploaded to the system before links can be created. The document management functions of WebCT are also limited and resources are added to a particular course site, rather than being placed in a generic database accessible to all users. Although using WebCT, course site design can be devolved to academic departments, it was also found that departments required a substantial level of support to do this. It was therefore concluded that the electronic course materials service should be separate to any virtual learning environment software used at UCL, although the two systems should be compatible. If UCL chooses to license a different VLE package, the facility to integrate with electronic reserves should be a consideration.

Cost / resource implications
At least one full time support officer for any VLE software licensed at UCL, to liase with the Subject Support Unit staff over course materials content.

Recommendation 10

It is recommended that the College should actively encourage departments to provide course materials in electronic format and in order to do this funds should be made available. The electronic course materials service is a valid extension of teaching support services and should be free to academic departments at the point of use.

However, to manage costs, each department who wishes to participate in the service should be allocated a budget to pay for any incurred copyright / digitisation fees up to a specified amount. Copyright costs will be kept to a minimum by working closely with academics in departments to ensure that free resources or those which fall under existing electronic subscriptions are exploited, and copyright fees are only paid for essential core readings.

After one year of operation, Library Services should review the chosen charging mechanism and funding of the service and consider alternative funding mechanisms, particularly if this has had a detrimental effect on departmental participation.

Any new service will require an income stream to be associated with it. The main decision to be taken here concerns how, if at all, central resourcing should be supplemented with charges to departments. Costs such as copyright may be significant; however, it should be considered that departments may be unable to pay these, and may be reluctant to use a service that passes on such costs. Some academic libraries are setting a limit on the amount of charges that will be paid centrally for each department. If UCL want to meet the increasing demand from students for electronic course materials and encourage academic departments to produce these resources, it should be recognised that the service will need some form of central funding. It is difficult to provide average copyright costs as these vary depending on publishers, however, from the experiments suggest that £500 per department might be reasonable allocation.

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[3] WebCT is currently being used at UCL as part of a pilot service and it has not been formally decided

The pricing of electronic texts is a important issue and will determine the feasibility of including certain types of copyright materials in the new service. Digital copyright permissions are usually granted on an annual basis; therefore any charges are recurrent. Where a publisher demands a particularly high permission charge it may be more cost effective in the long term to purchase extras copies of the textbook or journal in question, rather than pay an annual fee to provide electronic access. This study found that certain publishers were willing to grant permissions for free, particularly when UCL held an existing subscription to the journal in question. It would be important to gather more information about publishers who grant material either free of charge or at low costs, and work with academics to improve access to these resources.

Associated costs

If all departments at UCL were involved estimated costs would be £42,000 per year (at £500 per department)
However, it would be assumed that 20 departments might participate in the first instance (20 X 500 = £10,000)

This costs are based on the likely copyright charges that would apply if the copyright environment remains unchanged. However, if any changes to the terms of the Higher Education Copyright License and the 1988 Copyright and Patents Act take place, these costs may be significantly reduced.

Summary Recommendations

Establishing a new electronic course materials service would have significant resource and cost implications for UCL, including the creation of two new staff posts in Library Services, new equipment and central funding to pay for copyright and digitisation fees. The recommendations also have implications on other departments in the College, including Information Systems, Media Resources and the Management Systems Division. However, the Access to Core Course Materials has demonstrated that there is a genuine need for this service. Departments require advice and assistance to manage digital resources and ensure that copyright law is adhered to. They also need a secure website from which resources can be distributed. The demand for this service is driven by the tremendous growth in the production and use of digital

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to recommend this package and use it on a College wide basis.

resources and the use of the Internet to distribute these materials. Students require an increasing number of electronic resources to facilitate their learning. However, there is still a large amount of information only available in printed format and a need for digitisation services to prepare this material. It is important for UCL Library Services to continue providing a valuable and cost effective teaching support service. An electronic course materials service will ensure that UCL remains a centre of excellence and works towards achieving its teaching and learning strategy.

Summary Costs:

Total one off costs: £5800
Equipment (Software, scanner, Server etc.) £3000
ERes package $5000 (£2800)

Recurrent costs: £58,714
Staffing £28,102 + £17,112
Heron Subscription fee: £1000
Copyright and digitisation fees: £10,000
ERes Annual Fee $4700 (£2500)