

Education and Professional Development / Library Services

Access to Core Course Materials Project

DigiCOMS: Report of the Pilot Service



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Introduction

One of the objectives of the Access to Core Course Materials Project was to set up, run and evaluate a pilot electronic study pack service. The needs analysis demonstrated that the service needed to encompass a range of materials and so the service was broadened to include a variety of electronic course materials. The service included the production of electronic study packs, but also offered a digitisation service for other types of course materials; in particular a facility to make available in-house produced publications such as course handbooks and lecture notes.

Related to this work was a separate project funded by a grant from the Sub-Committee on Innovation in Learning, Teaching and Assessment (SCILTA) in the Department of Paediatrics and Child Health. The Project Officer was involved in setting up an intranet site to distribute a range of electronic course materials. The Department were particularly keen to include online assessment and for this reason it was decided to build the site using WebCT. This gave the Access Project direct experience of using virtual learning environment software, which could be compared to the simple course material system that was devised in-house. A full report of this project is available; however, the issues of relevance to the DigiCOMS service and an outline of the work is also discussed within this report.

Set-up of the Service

The first phase of this project was to devise an identity for the service and the name DigiCOMS (Digital Course Materials Service) was chosen by the Project team. An easily identifiable logo was also designed that could be used on any resulting literature and the web site. The service was then offered to 11 of the 13 departments who had taken part in the needs analysis, as these were deemed to be most interested in this type of initiative. Two departments were already involved in the service. Economics were taking part in the teaching collection experiment and Paediatrics and Child Health received a SCILTA award to set up a course intranet site using WebCT¹. Therefore, the remaining departments were invited to participate in the service and a letter was sent to the Head of Department and the original contact person who had taken part in the needs analysis (in some cases this was the same person).

¹ This project was part of the Access to Core Course Materials Project but additional funding allowed the Project Officer to spend more time working with this particular department.

Departments who responded positively to the initial invitation to participate included:

- Philosophy
- Dutch (Masters in Comparative Literature course)
- Biochemistry
- Primary Care and Population Science
- French
- Histopathology

The following departments decided they could not participate in the service:

- Hebrew and Jewish Studies
- Spanish and Latin American Studies
- Chemistry
- Medical School
- Mathematics

Non-participating departments

Chemistry, the Medical School and Mathematics did not respond to the invitation to take part in the pilot service and so their motivations for this were unclear. However, both Hebrew and Jewish Studies and Spanish and Latin American Studies gave an indication of their reasons. In the latter case, the lecturer who had taken part in the needs analysis was on sabbatical for the Academic Year 2001/2002 and therefore he would not be involved in teaching. He was keen to produce an electronic study pack for the following year; however this did not fit into the time scale of the pilot service. Hebrew and Jewish Studies decided not to take part because of the many problems they had experienced in the past with computing services. They also did not have any available funding to produce an electronic study pack. Departments who did not respond were sent one reminder e-mail, however, because of the time constraints of the project and the need to work with enthusiastic departments, they were not pursued beyond this. It was also decided that once six departments had agreed to participate, this number was more than sufficient as there was a need to ensure the work did not become unmanageable.

Outline of the Pilot Service

The DigiCOMS service included a range of electronic course materials and was largely shaped by the findings from the needs analysis. The research suggested that departments wanted to improve access to a variety of course materials, including in-house produced documents. The needs analysis also revealed that departments wanted a service that could be customised. Departments were informed that the service would be provided free of charge for in-house produced course materials, although any copyright permission fees would have to be paid. This may have affected the take up of the service and the type of material that departments wanted to include.

The first phase in the service involved scheduling a meeting with each of the departments who agreed to take part. During this meeting a more detailed breakdown of their particular requirements was drawn up and this was matched with what the Project Officer felt was possible to achieve in the limited period of time. This meant that the service offered something slightly different to each of the participants. A description of the service offered to each departments is outlined below.

Dutch (MA in Comparative Literature)

This was the most straightforward initiative; the department wanted to produce an electronic version of a printed course pack that the Subject Support Unit created the previous year. The Subject Support Unit provided the Project Officer with full costs of the printed course pack, including copyright clearance and print charges, and details of who the rightsholders were in each case. A direct comparison between the production of electronic and printed packs could therefore be undertaken.

Philosophy

Philosophy wanted to improve access to reading materials available in a printed study guide. It was believed that many of the readings were available through UCL's existing electronic journal subscriptions, in particular the JSTOR or Ingenta Service. Where possible the department wanted to link from the reading list to the full text articles.

Biochemistry

Biochemistry were interested in creating a course web site from which they could make available a variety of course materials produced in-house, such as lecture notes and course handbooks. They found it difficult to generate sufficient interest from

teaching staff in the department and subsequently withdraw from the pilot service and decided to make the information available from their departmental web site.

French

French were interested in putting lecture notes and other course materials produced in-house on the DigiCOMS site. They were particularly interested in being able to add materials to the site throughout the term and did not want lecture notes to be available before the class had taken place.

Histopathology

Histopathology wanted to make a selection of lecture notes and images available from the DigiCOMS site. The images were available as a slide collection that belonged to the Head of Department and they thought these would be particularly useful for students.

Primary Care and Population Science

Primary Care initially expressed an interest in the DigiCOMS service, but due to staff being on leave it was not possible to schedule a meeting with the department and they did not manage to send any materials for inclusion on the site.

Paediatrics and Child Health

This department were interested in creating a course web site from which they could distribute a wide range of resources. They were particularly interested in developing online assessment and multimedia resources. It was decided that this work had considerable overlap with the Project; however, it was more ambitious than could be achieved within the scope of a pilot study. Therefore the Head of the Paediatrics and Child Health Department worked with the Project Officer to secure funding from SCILTA to undertake this work. A decision was taken at an early stage that the site would be designed using WebCT, because it includes tools to create online assessments. This would also give the project experience of using a virtual learning environment package to distribute other types of course materials. Full details about this project are available in a separate report on the project website.²

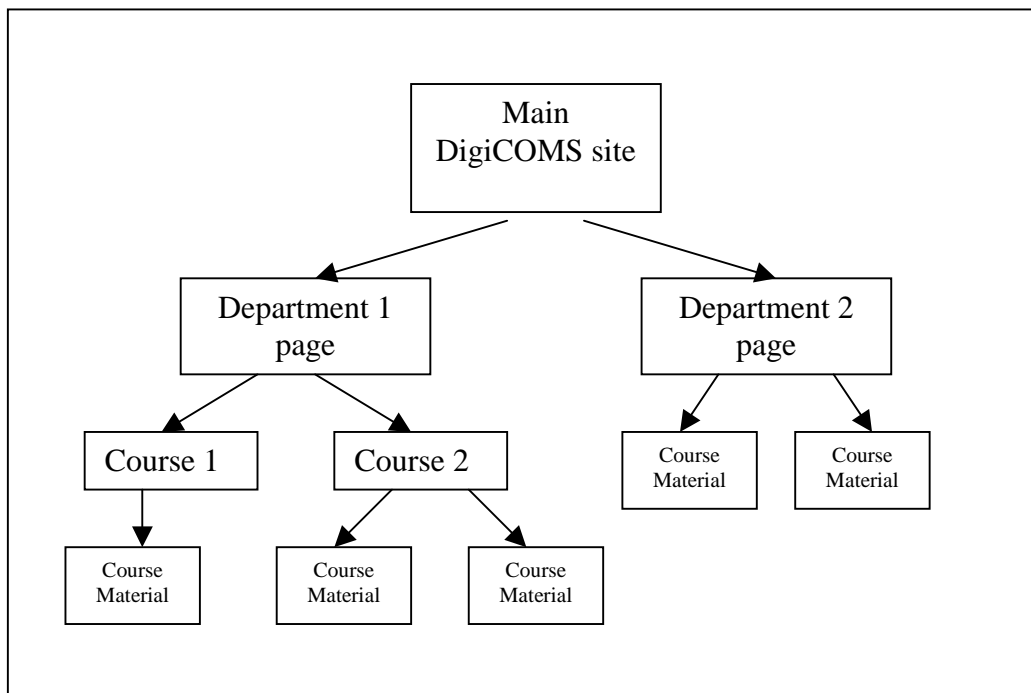
² See <http://www.ucl.ac.uk/epd/tqef/core/home.html>

The DigiCOMS website

The priority for the new service was to set up a secure web site from which the electronic course materials could be delivered. It was decided that this site would be managed centrally by the library, rather than devolving responsibility to departments. This enabled the library to control access to materials that required copyright clearance and to remove them once the permissions had expired. Secure file space to host the materials was also a desirable feature of the service identified by the needs analysis and one of the main reasons some departments wanted to take part.

The design of the website was discussed in detail by the Project Team, who met with the Director of Information Services. Authorisation for extra filestore space was required and it was estimated that 200MB might be needed in the first instance, depending on uptake by departments. Ideally materials would be held in some form of database so that the system would be scalable. Some discussion took place over the information management issues associated with the site and IT staff in Library Services agreed to help design the site using dynamic HTML. However, time and resource constraints meant that these ideas were eventually abandoned and for reasons of speed and simplicity the site was designed using standard HTML pages. Where possible, documents would be available as PDF files, as this has become a common way of distributing these types of resources. It also means that the document remains identical when it is printed out.

It was decided that the site would be divided into sections according to departments, where material could then be organised on a course basis if necessary. Electronic course materials were then listed in alphabetical order within a course list. A generic model was constructed for the departmental pages that could then be customised according to individual departmental requirements. Generally one page was constructed for each department with anchors to link to sections lower down the page. It proved necessary to design several pages for the Philosophy department because of the volume of material available on the site. Each page had links to other relevant subject based resources available on the library web site. The site had the following structure:



The site was originally going to be hosted on the Library web account, as it seemed sensible to link the site from the Library web site. However, it was subsequently decided that the materials would take up too much space and needed a separate web account. The application process for a new web account took over 3 weeks and during this time work was undertaken to design the site. The software package Dreamweaver was used and the site held on the Project Officer's PC until the account was available. During this period a dummy version of the DigiCOMS site was mounted on the Project website, with links to only non-copyright materials. This site was publicly available and participating departments were invited to view the dummy site and asked for any comments about the design.

The new web account was created in early September and it was relatively straightforward to transfer all the files into the appropriate directory and make the account live. Before this was done it was necessary to restrict access to the site to UCL staff and students. The pages were designated as part of the UCL Intranet using a particular script provided by Information Services. This means that when an individual tries to access the site they are prompted to enter their UCL login and password. This allows both on and off campus access, but ensures that only UCL staff or students can access the copyright materials. A link was included on the library web site to the new service and all participating departments were informed that the site was active.

Departmental progress

The work for each department was undertaken over the summer months and progressed at different rates. Given that all the initiatives were different it was difficult to develop a generic production model for the service. A summary of the work undertaken for each department is therefore included below:

Dutch (Comparative Literature)

It was decided that the reading materials would be submitted to the HERON service for copyright clearance and digitisation. This followed on from the findings from the teaching collection experiment that found that digitisation work could not be undertaken within the Library in a short space of time. It was also decided that copyright clearance would be undertaken by HERON to gather further experiences of using the service and compare it with the in-house process. The Subject Support Unit kept detailed records of the printed study pack produced the previous year. This showed that of the 13 extracts in the pack, 9 had been cleared through the Copyright Licensing Agency (CLA) and only four were cleared through the publishers. The rights to most of the material was held by some quite obscure publishers so it was interesting to see how easily HERON could get clearance.

It was subsequently decided that two extracts would be cleared directly via the rightsholders and these were withdrawn from the HERON system. This was because the course tutor knew the journal editor and author in each case and felt that better terms might be negotiated in this way. This was successful in one instance as the material was obtained free of charge and the author agreed that a digital copy produced by the lecturer could be used. In the second instance approaching the publisher directly appeared to make little difference as the copyright fee was still high.

The total cost to produce the printed study pack was: £231.18. This included £159.18 for copyright clearance fees and £72 for printing costs. In comparison, the electronic study pack total costs for copyright clearance and digitisation were far higher; estimated at £406. This included only 11 of the 13 extracts required as one was refused permission and one was still outstanding at the time of writing this report. It

should also be noted that these prices may alter as some of the prices provided were only estimates.

Philosophy

The Philosophy Study Guide is available from the department's website as a PDF file although all students would have a printed copy as the book is sold at the subsidised price of £1. The department were keen to preserve the document layout so that it would be familiar to students. However, they thought it would be particularly useful to link to full text articles where these were available. They consequently made the slightly unusual request of linking to the full text articles from a PDF file.

Due to the size of the Study Guide, which is over 200 pages long and includes hundreds of references, it was decided that only references available through JSTOR would be included. It was also decided to divide the document into chapters and the department were asked to prioritise chapters for linking. Seven chapters were selected and each was searched to identify those references available through JSTOR. JSTOR actively encourage initiatives such as linking to articles from reading lists, therefore they have created a facility to make this easier. The Citation Linking Tool has been created for librarians to avoid the problem caused by dynamic HTML links. Rather than searching for the article conventionally using JSTOR, the reference is entered into a form which then generates a static URL for a particular reference. The document will then be accessible on-campus and off-campus, if an ATHENS password is supplied. This Tool was extremely valuable and meant that the chapters did not need to include separate links for on and off campus access. Some clerical assistance was provided by the Subject Support Unit to undertake this work.

Linking from a PDF file is a slightly unconventional approach and it is not possible to link actual text to a URL using Acrobat. Instead an area of the document can be selected and created as a link. It was decided that links would be identified by using a red box around the relevant bibliographic reference. As links were added to each chapter these could be added to the site. It was also hoped that by dividing the study guide into chapters it would make the material more accessible to students. A link to the full PDF Study Guide was included on the Philosophy DigiCOMS site. Links to

helpful information already available on the Library website, such as ATHENS registration information and a link to the JSTOR site, were also included.

Histopathology

A DigiCOMS web site was constructed for the Histopathology Department who decided to concentrate on providing resources for a bone and joint course. They were particularly interested in making available some lecture notes and images, for which the department owned the copyright. In the first instance links to relevant subject based resources on the library web site were added to the Histopathology page. A link to the A-Z list of electronic journals was also added to the page.

The course material was given to the Project Officer in early September for inclusion on the site. The course aims and objectives and lecture notes were provided in Word and Word Perfect format. Histopathology arranged for a member of staff at the Royal Free to digitise a considerable number of images belonging to the Head of Department and held on 35mm slides. The images were provided in a PowerPoint presentation. As time was limited it was not possible to remove the images from PowerPoint and reorganise the material, therefore it was decided to make the file available from the site in its entirety. The lecture notes and course aims and objectives were converted into HTML format with links to Word and WordPerfect versions that the students could download. The lecture notes also included references to the images, so the appropriate slide numbers from PowerPoint were added to the notes to enable cross referencing between the documents.

French

The DigiCOMS site for the French department was constructed over the summer, to include links to a variety of language resources available on the library web site. However, due to delays in receiving the material from the department, the course materials section was empty when the DigiCOMS service went live. The Department eventually sent the material some time after the start of term and it was added to the site immediately. The material was all in-house produced information to support a number of courses run in the department and included material such as course outlines and reading lists.

Because the material was received after the official deadline for the DigiCOMS Service the Project Officer was only able to spend a limited amount of time organising the materials. It was therefore decided to arrange the document by course headings and to include links to Word documents. The files were all relatively small in size (less than 30KB) and so it was decided that the material would not be converted to PDF or HTML.

Paediatrics and Child Health

Using WebCT to distribute the materials meant that work could progress on this site immediately as UCL have already purchased a site license for this software and it is being used by other departments. The WebCT Support Officer based in EPD created a course for the department and a number of members of staff and the Project Officer was given designer status. The online assessment was the first area of the site to be developed as the department were keen to undertake a trial assessment before the final intake of students in 2000/2001 completed their course. Academic staff devised the questions and selected images to include in the test; these were then entered using WebCT's 'Quiz' function. All students must have a separate ID to access WebCT, so these details were added by the department administrator. The online assessment took place with 40 students in a College Cluster room and was regarded as successful by all who took part. Students were not familiar with WebCT before the trial, but had adequate web skills to access the materials.

Based on the successful pilot online assessment the site was developed further over the summer in time for the new intake of students. A range of other resources such as a course handbook, timetable information, web links and a chapter from a textbook were also added to the site. Media resources agreed to digitise some video tapes, that were to be made available from the site. This work was completed; however, unfortunately the files would not work if students were accessing the site from a Managed PC due to the set up of these machines.

Students were given a brief introduction to WebCT at the start of term and the facility to track students was used to ensure they could all access the site. They appeared to have few problems accessing materials. Adding new resources to the site did prove to

be time consuming however, particularly after the departmental administrator left. This meant a new member of staff had to be trained to use WebCT.

Problems

The service was run single-handedly by the Project Officer, with some limited clerical assistance and IT support. Dealing with six departments meant that the workflow was manageable, however, scaling up the service will require a significant investment of staff time and a commitment to resources. The development work for the WebCT course was particularly time consuming and it was fortunate that the extra funding had bought additional time so that the Project Officer could work on the site. A number of difficulties were also experienced while setting up and running the pilot service and these discussed are in detail below.

Deadline for submitting materials

The DigiCOMS service was offered over the summer in order that materials could be prepared for the start of the new academic term. However, as with similar current library activities such as the printed study pack service, many academics are away over this period and communication with them can be erratic. In order to manage the Project Officer's workload, it was important that materials from departments were submitted in sufficient time. Therefore, a deadline of the end of August was set for receiving materials. After this date they could not be included on the DigiCOMS website. It was important to maintain communication with all the participating departments over the summer months and ensure they were up to date with progress. However, despite frequent reminders, some departments did not provide materials in time to meet the deadline.

In hindsight it was felt that the deadline for receiving materials was too close to the start of term, and this caused problems getting copyright permissions for the electronic study pack prepared for the Dutch department. Consequently this material was not ready by the start of term. The printed study pack service set their deadline at the end of July to ensure they can get copyright permission and produce packs for the start of term. In order to ensure electronic study packs are ready in time, this deadline seems to be more suitable for materials requiring copyright clearance.

HERON and copyright clearance

The Teaching Collection Experiment suggested that copyright clearance could take longer using the HERON service than obtaining clearances in-house. This finding was confirmed while compiling the Comparative Literature study pack, for although the pack was submitted in early August 2001, only three documents had been cleared, digitised and delivered by the start of term. It was believed that the clearances would have been received far quicker if they were sought in-house and more of the readings would have been available for the start of term.

Additional problems were caused by several publishers refusing to grant permission for digital copy. Four extracts were initially refused permission, although in the case of three extracts which were from the same publication, the course tutor spoke with the publisher who agreed to allow them for one year only. Subsequently only one could not be included in the electronic study pack, which meant that it was not available to students. Furthermore, three of the extracts were not held by the British Library, therefore in order for digitisation to be undertaken, the Project Officer had to photocopy the Library copy of the requested item. The experiences of producing this study pack were quite different to the experiences during the teaching collection experiment and this was perhaps a reflection of the different nature of reading materials for undergraduate and postgraduate courses. The Comparative Literature course included readings from mainly smaller, less well known publishers and it was consequently more difficult to get copyright clearance and to have the material digitised.

Costs

Related to the issue of copyright clearance is the cost associated with digitising core reading materials. All the departments apart from Dutch chose to use in-house produced material rather than core readings that required copyright clearance. The material for the Masters in Comparative Literature was selected partly by considering whether publishers were likely to charge a permission fee. Similarly once the lecturer realised the costs of certain items, he decided that in future years he would look for alternative readings that might be less expensive. This experiment demonstrated that copyright clearance fees for digital copies are significantly greater than for paper copies. In this case the pack was estimated at just over £400, whereas the paper pack

had been approximately £230. The lecturer also was aware that the costs of printed study packs can be recouped by the department by selling it to students. This was not possible with the electronic readings and the Dutch department had to meet the costs themselves. Fortunately in this instance they were able to do this. However, the issue of whether copyright fees are passed on to departments or are paid for centrally is crucial when scaling up the service. It will certainly be an issue that will affect the level of take up of the service.

Setting up the WebSite

Setting up the DigiCOMS website was more time consuming and complicated than anticipated. Although technical advice was available, there was only a limited amount of technical assistance offered to create the site and so it was largely set up by the Project Officer, who had fairly basic web page design skills. This meant the site was designed using static HTML, rather than some form of database to organise all the documents. Given that only a small number of departments participated in the pilot service and they had a limited number of resources, information management issues were not experienced. However, the basic site design was not considered to be scalable if the service is to be offered on a College wide basis. Ideally users would be able to interrogate a database to locate the documents they required. Documents could be identified by department, course and course tutor so that students could enter these details and be taken to a list of relevant documents. Using a database would also make it possible to search for particular documents, which would be a useful feature of any service.

Problems with WebCT

WebCT was the obvious choice for creating online assessment materials given that UCL have a site license for this product. However, the software is not straightforward to use and at the outset of this project the department were aware that it had limitations. WebCT provides a framework for distributing course materials, however files first need to be constructed in HTML before being loaded into WebCT, adding an additional stage to the work. Staff also had to learn how to use the software package with relatively limited support available. The department had to create a student account for each user and obtain details such as student user IDs from Information Systems. All this took time to undertake and staff found there was a steep learning curve during the process.

In terms of the assessment, the question types available in WebCT were not sufficient to design the type of questions that appeared in the written exams. For example, multiple response questions that the department currently use in traditional assessments could not be included, as the negative marking scheme did not work. It was possible to create an exam with image based multiple choice questions and also to design matching questions with images. However, it was again time consuming to enter questions into the software. The department did like features such as being able to track students and identify which individuals had not accessed the site. However, throughout the project there were concerns about security and whether students could access exam material.

Conclusions

The pilot service suggested a number of conclusions about the shape of a full scale service and raised a number of issues which need further consideration, including:

- (i) The value and level of use of a future service and the types of materials departments might want to include;
- (ii) Required staffing levels and skills to operate a full scale service;
- (iii) The time involved to prepare materials, make them available and set-up and maintain a new web site;
- (iv) The type of processes that could be undertaken in-house and those which might best be out-sourced;
- (v) The role of the HERON Service
- (vi) Equipment required
- (vii) How to integrate into current activities of the library
- (viii) A comparison between building an in-house course materials system and using WebCT to design a course site;
- (ix) The overall feasibility of a new service and how it might be funded.

(i) The value and level of use of a future service and the types of materials departments might include

The pilot service suggested that this type of service would be valuable to departments and if offered on a College wide basis it would be reasonable to assume that around 20 departments might take part in the first instance. Although many departments already make course materials available through their departmental website, many

were in favour of a centrally provided service for a number of reasons. Departments were concerned that many course materials ought not to be available on a public web site and the central service would provide a secure environment to distribute them. Academics also frequently do not have the time and/or the expertise to make these materials available and to maintain them. Departments also felt that materials requiring copyright permission should be dealt with by the library, who have the appropriate knowledge and skills. It was anticipated that the demand for the service would grow as more departments see its potential application of this.

The pilot service confirmed the findings from the rest of the project, that departments would want to include a range of materials in the digital course materials service, such as core readings, lecture notes and images. There was some evidence to suggest that the cost of copyright clearance fees may make departments reluctant to produce electronic study packs, but this is discussed in more detail elsewhere.

(ii) Required staffing levels and skills to operate a full scale service

The level of staffing and amount of staff time required to offer the service inevitably depends to some extent on participation by departments. However the full scale service will require at least one full time member of staff, with IT and clerical support. Staff would require a range of skills, including web page design skills to maintain the service, experience and knowledge of digitisation techniques, the skills necessary to create a web-based database, negotiation and interpersonal skills. They were also need of copyright law, in particular relating to digital copies.

(iii) The time involved to prepare materials and make them available

The service would need to operate throughout the year, as although many lecturers might want to prepare their teaching materials for the start of the new teaching session, others would want to add materials as the course progressed. Extra clerical support may be required over the summer vacation, however through the year the service would need to be maintained and updated depending on individual course requirements. At least 6 weeks notice are necessary to prepare digital core readings, longer would be needed if the HERON service was used. Moreover, to scale up the service significantly, it will need to have a database behind it, which may be an off-the shelf electronic reserves package or built in-house using dynamic HTML. This would mean time would need to be devoted to maintaining the database.

(iv) The type of processes that could be undertaken in-house and those which might best be out-sourced

From the experiences of this project it seems that digitisation work could be out-sourced to the HERON service for digital core readings. In-house produced materials could be scanned or converted to PDF in-house. Departments should be asked to provide them in electronic format wherever possible. Copyright clearance work can be undertaken in-house using the expertise built up in the Subject Support Unit, as the process of getting clearance for digital copies was identical to printed copies.

(v) Further experience of the HERON Service

Further experience of the HERON Service demonstrated the difficulties of getting digital permissions from certain publishers. In contrast to the Teaching Collection Experiment, when all permissions had been granted and all the material was obtained from the British Library, the material requested for the Comparative Literature course was problematic. Consequently, it appears that for specialist courses, it would be quicker and more effective to try and negotiate permissions in-house and to supply photocopies of material which may not be help by the British Library.

(vi) Equipment required

The equipment required to support a full scale service would depend on the extent to which digitisation work was undertaken in house. However, the minimum requirement is a designated scanner, networked PC not on the managed system, and file storage space. It may also prove necessary to purchase a server to hold the materials, which at the present time are being stored on the Project Officer's PC and in the new departmental web account. Web page design software, Adobe Acrobat suite, image manipulation software (e.g. PhotoShop) would all also be required. The estimated costs for this equipment (including a new server) would be £2000.

(vii) How the activities might be integrated into current activities of the library

Electronic teaching support services should be fully integrated into the printed services already available to avoid artificial distinctions between related activities. Copyright clearance work could be fully integrated into the current activities of the Subject Support Unit. There is essentially no difference in requesting permission for paper study packs to electronic course readings. Academic staff submitting items in the Teaching Collection or preparing paper study packs should be informed of the new services. It is recommended that the Subject Support Unit should work closely

with the Electronic Journals Administrator to see how existing subscriptions can be exploited to link reading lists to full text services. It is also recommended that Subject Librarians would play an important role in publicising the new service and fostering contacts in academic departments to generate enthusiastic participants.

(viii) How the new service might be funded

The new service would require a certain element of central funding to pay for new staff, equipment and annual fees such as the HERON subscription fee. Also consideration needs to be given to the recovery of copyright fees as it is clear that the need for Departments to meet these costs had a significant negative impact on the participation of several members of the pilot group. It was significant that most departments wanted to include materials that did not require copyright clearance charges. A variety of charging options need to be considered to continue the service, including, negotiating a central budget to pay for copyright fees as part of the new service, charging fees back to departments, or using money from existing library budgets to pay fees.

In-house system verses VLE software

The in-house built DigiCOMS website provided a secure environment to distribute a range of electronic course materials. Using a relatively simple procedure it was possible to password control the site so that only UCL staff and students could access it. This was sufficient to satisfy the term and conditions of the HERON license and users entered their UCL login and password, rather than needing an additional ID to access the site.

WebCT is the Virtual Learning Environment (VLE) for which UCL have purchased a site license. It has been made available to departments as part of a pilot project and there is a part-time support officer. At the present time it is not clear if this package will be adopted on a college-wide basis. Findings from the TQEF funded Electronic Administration Project launched in September 2001 will be significant here. The main advantage to using a VLE is that it has tools for building course web sites and supports a range of functions. For example WebCT has a chat and bulletin board facility and allows assessments to be created. VLE software has a clear overlap with the DigiCOMS service and some department may prefer to distribute their course

materials within this type of system, particularly if they want to incorporate functions such as assessment.

Given the trend in Higher Education towards online learning, it seems likely an increasing number of departments at UCL will want to use VLE software. The College has a number of current projects assessing how they might develop in this area, but a clear overlap exists between VLEs and a digital course materials service. One solution might be to combine VLE support with the electronic course materials service. However, based on the experiences of this project, departments using WebCT require a considerable amount of support, particularly when the course site is first created. Many universities have recently created Teaching and Learning Support Units that take responsibility for this type of work. UCL might consider this approach when implementing an electronic course materials service, however this would widen the remit of the service and would require additional staff posts. Traditionally at UCL, all college approved software is supported by Information Systems, therefore it might be appropriate for the support to be based here.

The overall feasibility of a new service

The pilot service has shown that electronic course materials are clearly an important resource and academic departments need advice, support and technical assistance to prepare these materials, and to deliver them to students in a secure and organised environment. Departments require a flexible service that allows them to include in-house produced documents, such as course outlines and lecture notes, as well as core readings. More information about the value of this service will be obtained through evaluation work with staff who used the service and students who access the materials. However, based on the evidence to date, this type of activity could be integrated into the library's current teaching support services and would be a valuable extension of this work.

The full scale service would only be feasible if properly resourced with at least one additional post in Library Services. The full recommendations for the continuation of the service are available in the Access to Core Course Materials Final Report and the Recommendations for SCILTA document. However, the DigiCOMS service was a

valuable exercise and demonstrated the need for this type of service, but the problems and issues that would need to be considered when scaling up.