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New Media and IT Developments

Managing the change

Recent general developments in Higher Education in the United Kingdom are summarised and the strategic importance of the Dearing and Follett reports for IT developments within the Higher Education sector highlighted. The current UK electronic information landscape is sketched, reference being made to initiatives such as NESLI and to programmes such as e-Lib. The trend towards converged university library and computing services, and the opportunities and issues arising from such organisational structures are discussed, as are management issues arising from the implementation of new generation library management systems. Particular reference is made to projects and experience at King's College London. In conclusion, the challenges presented by new media and IT developments for library staff are outlined.

Neue Medien und IT Entwicklungen: Organisation der Veränderung

Die neuesten allgemeinen Entwicklungen im Höheren Bildungsbereich in Großbritannien werden zusammengefaßt und die strategische Bedeutung der Dearing und Follett Reports für die Entwicklungen der Informationstechnik in diesem Bereich wird hervorgehoben. Die derzeitige elektronische Informationslandschaft in Großbritannien wird umrissen und auf Initiativen wie NESLI und Programme wie e-Lib wird hingewiesen. Der Trend hin zu zusammengefaßten Bibliotheks- und Computerdiensten an Universitäten und die Möglichkeiten und Fragen, die aufgrund dieser organisatorischen Strukturen entstehen, werden ebenso diskutiert wie Fragen der Organisation, die durch die Implementierung von Bibliotheksmanagementsystemen der neuen Generation aufkommen. Im besonderen wird auf Projekte und Erfahrungen am King's College London eingegangen. Zusammenfassend werden die Herausforderungen, die sich dem Bibliothekspersonal durch Neue Medien und IT Entwicklungen stellen, umrissen.

Nouveaux médias et développements IT: organiser le changement

Les développements généraux les plus récents dans l'éducation supérieur au Royaume Uni sont résumés et l'importance stratégique des reports Dearing et Follet pour les développements de l'informatique dans ce domaine est souligné. On dessine le paysage de l'informatique actuel en Grande Bretagne et les initiatives comme NESLI et des programmes comme e-LIB sont mentionnés. La tendance vers des services de bibliothèques et de l'informatique intégré aux universités et les possibilités et les questions qui résultent de telles structures organisatrices sont discutées de même que les questions d'organisation qui surviennent par l'implémentation de systèmes de management de bibliothèques de la nouvelle génération. Tout particulièrement on aborde les projets et les expériences du King's College à Londres. En résumant on esquisse les exigences et les stimulations qui se présentent au personnel des bibliothèques par les nouveaux médias et les développements IT.

I intend to talk briefly about general developments in higher education in the United Kingdom in recent years, to say something about projects and changes at my own institution, King's College London, and to give an indication of some of the issues to which new media and IT developments give rise.

1 General Developments

The Dearing Report

The report of the National Committee of Inquiry into Higher Education (The Dearing Report), was published in July 1997. The Dearing Committee had terms of reference which invited it to make recommendations on how the purposes, shape, structure, size and funding of higher education, including support for students, should develop to meet the needs of the United Kingdom over the next 20 years, recognising that higher education embraces teaching, learning, scholarship and research.

The report should be seen in the context of the number of students in the UK almost doubling in the past 20 years, with public funding for higher education increasing in real terms by 45% and the unit of funding per student falling by 40%.

Of particular import for libraries are the following Dearing recommendations:

- That all higher education institutions in the UK should have in place overarching communications and information strategies by 1999/2000. [Recommendation 41]
- and that
- By 2000/2001 higher education institutions should ensure that all students have open access to a networked desktop computer, and expect that by 2005/06 all students will be required to have access to their own portable computer. [Recommendation 46]

Clearly, there are, in particular, space and resource management implications associated with this recom-

mentation. In my own institution the phrase “access to a networked desktop computer” is interpreted at a ratio of 10 students to one networked desktop computer, a goal towards which we have been working for some time.

The Follett Report

The Dearing Report was preceded by the report of the Joint Funding Councils' Libraries Review Group, chaired by Sir Brian Follett. Many of you will already be aware of the importance of the Follett report for UK academic libraries, and I believe it has had a certain resonance further afield. The report was the result of an investigation into how to deal with the pressures on library resources caused by the rapid expansion of student numbers and the world-wide explosion in academic knowledge and information. The report was published in December 1993.

One of the key conclusions of the Follett report was that – “The exploitation of IT is essential to create the effective library service of the future”. [*Paragraph 29*]

The Follett recommendations resulted in substantial sums of non-formula funding for higher education libraries. The funding is channelled through the Joint Information Services Committee of the Higher Education Funding Council (JISC).

Specialised research collections in the Humanities

Around £ 50M has been made available to enhance access to specialised research collections in the Humanities. Of particular note within the IT field are retroconversion projects. Within my own institution, for example, Follett funding was made available for retrospective cataloguing for four of our Library special collections and also for an internationally renowned archival collection, the Liddell Hart Military Archive. Indeed, there are some very large retroconversion programmes going on in university libraries and archives throughout the UK. Other areas funded under this programme include preservation, and promotional work.

e-Lib

A great deal of post-Follett investment, about £ 16M, has also been within the framework of the first two phases of the e-Lib programme, which has incorporated over sixty projects in all. Many of the individual projects have had very specific, narrow objectives. However, they are grouped under a number of headings including: Access to network resources; Electronic document delivery; Electronic journals, Electronic short-loan projects; Images; On-demand publishing; and Training and Awareness. Unlike the US Digital Libraries Initiative, which has done a lot of blue skies research, e-Lib has tended to focus on practical problems and to try to find solutions. JISC's objective from the start has been the widest possible applicability in Higher Education.

Phase 3 of the e-Lib programme, which is now underway, has three particular streams of activity: namely hybrid library, large scale resource discovery and digital preservation projects.

Other important IT initiatives that have figured in the UK recently include:

UK Pilot Site Licence Initiative (PSLI) and its successor, NESLI

The Pilot Site Licence Initiative (PSLI) is a three-year bulk purchase arrangement by the Higher Education Funding Councils which gives us electronic access to journals published by Academic Press, Blackwells and the Institute of Physics, as well as discounts on printed titles to which we subscribe. The initiative explores different models, with all Academic Press titles being available electronically through the IDEAL service, but only those titles to which we have a print subscription being available electronically from the other two publishers. The PSLI is due to finish at the end of 1998 and the Funding Councils have asked the Joint Information Systems Committee (JISC) to oversee its continuation.

Phase 2 of the National Site Licence initiative, known as 'NESLI' (National Electronic Site Licence Initiative), is due to go live from January 1999, and will run for three years. The project, which is sponsored by JISC, will be for electronic journal provision only. The aim is to operate on standard commercial principles, with libraries purchasing electronic journals as a large consortium via a Managing Agent.

The benefits to the academic end user of this arrangement will include:

- A single interface and single access point for electronic journal provision.
- A rich pot of electronic journals from a range of publishers.
- Links, where practicable, to abstracting and indexing services.

Benefits to libraries will include:

- The provision of a single access point, single interface, and a single set of technical standards to publishers' electronic journals.
- The provision of a single solution to multi-publisher deals, licences, access and security.
- Negotiation of discount and usage terms on behalf of the UK Consortium.

Clearly, electronic access could mean a reduction of hard copy holdings and consequent release of space, if the electronic archiving problem is solved on a national scale.

Related to this development is the introduction of the JSTOR service into the UK.

JSTOR service

The UK Mirror site of the JSTOR electronic journal collection became exactly one week ago on 17 March 1998. JSTOR is a digital archive collection of core scholarly journals starting with the very first issues, and made available to participating institutions via the World Wide Web. The collection covers material from the 1880s up to a “moving wall” of between 2 and 5 years which guarantees the user a stable collection of past issues. By the year 2000, a minimum of 100 journals in a variety of fields will be accessible and there are currently some 2 million pages from over 40 titles.

Convergence of library and computing services

Converged services are to be found in an increasing number of UK Higher Education institutions. What do we mean by 'converged'? In very general terms convergence means the merger of library and computing services within an institution. In some cases, other services (such as audio-visual) are brought under the same umbrella.

There are very different models for such services. They may be characterised by one or more of the following:

- A 'Director of Information Services' or similar heading the service.
- A common chairman of library and computing committees.
- A pro vice chancellor or equivalent responsible for library or computing activity.
- Simple good will between the services.
- A peer co-ordinator in charge.

The general advantages of converged services are perceived as being:

- That they allow more flexible budgeting.
- That services can be made to work together more effectively.
- That there is a stronger direction to the Information Service.
- It allows for different ways of organising staff.

New generation library management systems

Increasing numbers of UK university libraries are upgrading to new generation library management systems. Apart from those libraries which would be intending to procure a new system on a regular 7-8 year cycle, there are those that are being driven to do so on account of one company takeover in particular (ie SLS by Innovative), so there will be an unusually large number of procurement exercises in the next year or so. The new generation systems allow us to explore in depth the opportunities offered by their capacity for seamless connectivity to other electronic resources such as electronic journals, external bibliographic databases, material held on CD-ROM, and images. The systems' ability to execute parallel searches on databases (including library catalogues) held on other Z39.50-compliant systems will be of great benefit.

2 Projects and Change at King's College London

King's College London

King's College London is a research-led teaching university with a strong commitment to enhancing its international research reputation and developing teaching excellence in a research context. The College is merging with the United Medical and Dental Schools of Guy's and St Thomas' hospitals (UMDS) with effect from 1998, at which point it will have approximately 16 000 students. It is a large multi-faculty College of London University and operates on several sites throughout London.

What of developments at King's? The College has a strong commitment to exploiting information technology for teaching and research and has been particularly associated with the JISC-funded Arts and Humanities

Data Service, and the LAMDA, MALIBU and CINE projects; and we are currently implementing a new generation library management system (ALEPH 500). Library and Computing services are converged.

AHDS (Arts and Humanities Data Service)

The Arts and Humanities Data Service, which is affiliated to King's, is a national service funded by the Joint Information Systems Committee with a mission to collect, describe, and preserve the electronic resources which result from research and teaching in the humanities. It encourages scholarly use of its collections and makes information about them available through an on-line catalogue.

LAMDA (London and Manchester Document Access)

The purpose of LAMDA is to provide a document delivery service within a cooperative organisational framework. Delivery is by electronic means using Ariel software over the academic network, offering users a fast, high-quality document delivery service. There are nine major libraries within London and Manchester which are supply libraries, including King's. The University of Leeds joined as tenth supply library early in 1997. A limited service of delivery of journal articles began at the end of October 1995, and work started early in 1996 to attract customers from among other university libraries in the UK. By July 1998 when project funding ends, LAMDA expects to have over 50 customers and an annual volume of business approaching 50 000 articles. The service will become self-financing in August 1998 and the intention is to expand the market outside Higher Education and beyond the UK.

CINE (Cartoon Images for Network Education)

This project was designed to create short animated sequences which would explain various IT topics. The animations are intended to be entertaining, concise, and relate to broad concepts such as:

- Text searching techniques.
- The World Wide Web.
- Z39.50 operation.

MALIBU (Managing the Hybrid Library for the Benefit of the User)

Malibu is a hybrid library project. The term 'hybrid library' has come to be used to describe a set of services that provide maximum information about all scholarly resources, whether in digital or non-digital form. The key objective of MALIBU is to provide an environment in which the individual scholar, from his or her workstation, can obtain reliable information about resources anywhere in the world and can make use of such resources in the most effective and convenient way. Its purpose is to assist scholars to take maximum advantage of the new resources and technologies in any aspect of research, teaching and learning, where they may be appropriate.

The other universities involved in MALIBU are Oxford

and Southampton. The project is one of five funded in the 'hybrid library' stream of phase 3 of the e-Lib programme. (The other streams relate to large scale resource discovery and preservation).

Procurement and implementation of a new library management system

The projects that I have just mentioned, although important, affect a limited number of staff directly and those involved tend to be individuals with particularly well developed IT-related skills. One area that affects all our library staff from top to bottom of the hierarchy is the procurement of a new library management system. We have recently undergone a European tendering exercise for a new system at King's. We were concerned right from the beginning of the project that all library staff should feel that they had been involved in the process. After all, there can be no IT-related project that affects so many staff on a daily basis. Although major decisions were taken by a steering group, staff had the opportunity of providing input to the Request for Tender and the selection process through library working groups and as individuals. Now that the system has been chosen, they are kept informed of progress in the implementation by regular bulletins. We are moving from a character-based environment to one that is entirely windows or web-based and we are well aware that many of our staff require training in a windows environment prior to any system-specific training. Strong leadership, project management skills and a consensual management style are key elements in the success of such exercises.

King's College London Information Services and Systems: a converged service

King's College Information Services and Systems came into being in 1993. We have a Director of Information Services and Systems and he has provided strong direction over the past 5 years, so far without a large scale restructuring of staff, but with considerably enhanced degrees of cooperation between library and computing services.

However, as I mentioned previously, we are about to merge with the United Medical and Dental Schools, and this will involve large scale moves of academic departments with consequent changes in the structure of the Information Service. It will also mean merging two library and computing services and the further integration of a third: namely those services supporting academic activity at the Institute of Psychiatry which became part of King's in August 1997.

It has seemed sensible to restructure the organisation completely, and we are in the throes of defining the structure at the moment. It will be in place by 1 August 1999. Our change is unlikely to be as radical as that at the University of Birmingham, where library and computing services are converged from top to bottom, but we do expect much closer working together of library and computing centre staff throughout the hierarchy, from senior management to junior staff.

Convergence: some general issues

What general issues have arisen within the loosely converged structure that we have had to date?

Enhanced degrees of co-operation have not come without some problems: Most library staff have become quite computer literate, they are aware of developments in IT and tend to have a higher profile than computing centre staff and to be more service-oriented in their outlook. As a result of increasing involvement of library staff in IT matters, previously regarded as the province of computing centre staff, tensions have sometimes arisen.

Who is responsible for PCs in the library? Should we distinguish between the management of staff work-stations and those for the public? What about the CD ROM network? Library staff are generally much more visible than computing centre staff – Is it to library staff that students come when PCs are not working properly? Who provides IT training for library users? Who produces user documentation? Demarcation or duplication of work can be a major issue, and it is particularly important in a converged service that areas of responsibility and reporting lines are clarified and promulgated. If these are not dealt with, friction can result.

Anomalies that have arisen over years need to be sorted out: certain workstation facilities may have been run by library staff, others by computing centre staff – historically the machines may have been bought from different departmental allocations. At King's, we decided that all networked public PCs should be managed by the Computing Centre.

But what happens when computing centre staff are not available and library staff are (for example, on Saturdays). Although library staff are often able to assist users, if they are staffing a desk, the desk cannot be abandoned, and this makes service provision rather haphazard. It must be recognized, too, that not all library staff have the expertise to be able to help, and a certain level and quality of service cannot be guaranteed. Some consistency of method and level of service provision across public workstation rooms needs to be achieved. IT training, too, needs to be coordinated; perhaps not only across library and computing services, but across our institutions.

3 IT and New Media: current and Future Challenges

What do all these IT and new media developments mean for library staff? Clearly there is a need for a cultural shift amongst our colleagues; while some embrace new technology easily, others do not. On the other hand, those individuals who have embraced technology, are not always the ones who are the most service-oriented.

In general, Library staff will in the future have to address new issues and adopt new roles:

- Within the sphere of *Collection Development*, staff will have to ensure that account is taken of both printed and digital media in collection development policies, and they will have to consider problems relating to obsolescence of electronic systems, and consequent implications for digital archiving and preservation.
- Staff will require *enhanced searching skills*, in order to take account of both print and electronic media.

- *Metadata management* will become increasingly important. Staff will have to be able to develop local architectures for database access, and to supply appropriate links to regional, national and international resources.
- Senior staff are increasingly having to be involved in *rights negotiation* in order to negotiate contracts and licences with commercial suppliers, and to draw up interinstitutional agreements.
- Associated with our own enhanced searching skills will be *the need to train library users to find, use and manage information in the hybrid environment*.
- There will clearly have to be significant investment in *continuous updating of management, professional and technical skills*. In short, we will, I believe, have to become even more imaginative, flexible and versatile, if we are to provide the full range of services that our academic communities require in the 21st century.

The days of the Universalbibliothek have long since disappeared, if indeed they ever existed, but I would contend that today, with a combination of printed and digital resource, and the involvement of highly trained staff, the likelihood of meeting the information needs of

our library users is probably greater than it has been for many years.

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