

# **LIBRARIES WITHOUT WALLS**



the distributed delivery of  
library and information services

**Edited by**  
**Peter Brophy**  
**Shelagh Fisher**  
**Jenny Craven**

# **LIBRARIES WITHOUT WALLS 5**

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Proceedings of an international conference held on 19–23 September 2003,  
organized by the Centre for Research in Library and Information Management  
(CERLIM), Manchester Metropolitan University

EDITED BY

**Peter Brophy**  
**Shelagh Fisher**  
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# 1

## Introduction

Peter Brophy, Shelagh Fisher and Jenny Craven

The fifth Libraries Without Walls (LWW5) conference was held in Lesvos, Greece, from 19 to 23 September 2003. It continued the tradition of the LWW conferences by bringing together international perspectives on the delivery of library and information services to users who are not in the physical library. When the first LWW conference was held in 1995, the focus was primarily on distance learning and geographical dispersion. Since then, however, rapid advances in the development of information and communications technologies (ICTs) based infrastructures and services have led to a situation where many library users now routinely access services remotely – even when ‘remotely’ means ‘within sight of the library building’. As a previous conference attendee observed, ‘we are all distance learners now’. LWW5 was concerned with innovative ways of delivering library and information services in this new environment

In his keynote paper (‘Beyond the Mainstream’, Chapter 2) Peter Brophy reflected on the focus of the LWW conferences since 1995 when the first LWW conference was held to disseminate findings of the BIBDEL project in which three university libraries had worked together to explore the delivery of library and information services ‘at a distance’ through the use of information technology (Irving and Butters, 1996). Brophy noted that in the second LWW conference held in 1997 (Brophy, Fisher and Clarke, 1998) the remote delivery of information services was a subject that had seen rapid growth as an area of specialist interest, so that by the third conference (Brophy, Fisher and Clarke, 2000) the topic had moved into the mainstream of information service delivery and, by the fourth conference (Brophy, Fisher and Clarke, 2002) in 2001 the topic was actually driving the mainstream. In his paper Brophy raised critical questions about the

notion of the 'library' as an appropriate construct and about the need to develop a new model of 'libraries without walls'.

Subsequent papers that were delivered at the conference all contributed in some way to addressing these questions by articulating the findings of new research and the evaluation of novel practices in remote delivery in the context of education and lifelong learning. The themes of the conference were:

- the integration of library services and virtual learning environments (VLEs)
- the relationship between user needs, information skills and information literacies
- usability and accessibility of digital library services
- designing the information environment: national and institutional perspectives
- the creation of digital resources by user communities.

Within the first theme – the integration of library services and virtual learning environments – Black and Roberts (Chapter 3) explored the twin subjects of the integration of library services within VLEs and the design of information environments to support staff within this rapidly changing context. Staff at Information and Media Services at Edge Hill College of Higher Education (Ormskirk, UK) have developed a 'life cycle' approach to support staff in the development of their awareness and skills to support online learning. The paper reviewed the identification, development and evaluation of a number of e-support mechanisms that have equipped staff with the skills and confidence to support e-learning developments. The paper concluded by identifying the need to take an holistic approach to developing 'staff without walls' who need to work across conventional boundaries. Kooistra et al. (Chapter 4) presented the results of work being undertaken at universities in Delft and Utrecht in the Netherlands in which the aim is to initiate networks or working groups that serve as virtual centres of knowledge and experimentation on specific themes, in order to advance education and research. The concern here is with web-based applications that provide access to information for a certain professional field to stimulate user communities. The contention is that the roots of these user communities lie on campus and it is valuable for the student and the university to develop peer-driven, information-based networks during the study period, to continue them after graduation and to involve existing experts.

Findings from the UK Joint Information Systems Committee (JISC) funded DEViL (Dynamically Enhancing Virtual Learning Environments from within the Library) project undertaken with pilot courses at the University of Edinburgh and Open University were presented by Scantlebury and Stevenson (Chapter 5). The project focuses on pedagogical, cultural and institutional factors influencing course team decision-making with regard to incorporating library services in the

production of VLE courses. Here it was concluded that, in a world of increasing competition for e-learning services, it is even more imperative that librarians become fully engaged with the crafting of the content, and play a key role in supporting learning through greater facilitation. Ahtola's presentation (Chapter 6) discussed the methods adopted in Tampere University Library in Finland in developing the library as a physical and virtual learning environment, in integrating digital services into virtual learning strategies, and in improving the usability and accessibility of library services. Ahtola concluded that academic libraries can no longer afford to be silent partners in their learning communities. They cannot just ask to be trusted, but instead they have to show how they can be integral parts of academic communities, and partners worth trusting. Finally, under this theme, Garoufallou, Siatiri and Hartley (Chapter 7) reviewed the developments that have occurred in Greek academic libraries in the last decade, while noting that support and promotion of VLEs within Greek universities is now seen as a task for academic libraries. They concluded that although the current technological infrastructure in Greece might not support heavy use of VLEs, and that there are gaps in the knowledge of librarians, Greek academic librarians have already demonstrated a capacity for rapid development of library services. Active involvement, or even adopting a leadership role in the creation of VLEs, can only further enhance the role of librarians in Greek higher education.

In exploring the relationship between user needs, information skills and information literacies (the second conference theme), Moore started with the premise that encouraging student engagement with information skills teaching has always been difficult and that transferring this to the impersonal context of virtual learning is even more challenging (Chapter 8). She described the curriculum-based approach taken at Sheffield Hallam University (UK) to deliver information skills in the virtual learning environment and drew on some of the lessons learnt from this experience. Rutter and Dale (Chapter 9) showed how a 'student perception' approach to information skills teaching was used to engage two very different groups of 'widening participation' students. The two case studies demonstrated how a bespoke service and a set of interventions enabled deeper and more independent learning. In examining information literacy and learning, Virkus (Chapter 10) took a more theoretical stance from the position that the concept of 'information literacy' is ill-defined. She concluded that there are many definitions and meanings of information literacy and that its nature is complex and difficult to capture. In designing instruction in information literacy, library and information professionals should also know what happens in education and the developments in research in this field. In the final paper under this theme Needham described the results of an evaluation of an Open University (UK) course on information literacy (Chapter 11). Data was collected from over 600 learners to find out what factors had led them to undertake the course, whether

they had achieved their objectives and what could be learned from this group about the value placed on information literacy by a wider population of learners.

The third theme of the conference was 'Usability and accessibility of digital library services'. The five papers within this theme tackled a spectrum of issues from the micro to the macro. For example, King et al. posited a framework for evaluating digital libraries from the perspectives of usability and accessibility (Chapter 12), while, in stark contrast, Kolawole (Chapter 13) presented the constraints faced by Nigerian professionals in using libraries. Noting the diverse needs within the group, she suggested that libraries might best demonstrate their relevance to this group by providing a blended information service with an appropriate mix of innovative on-site resources and networking activities complemented by off-site, remote access to virtual content, leaving the choice of method of access to the user. Toni (Chapter 14) evaluated remote access to e-documents, their impact on the general use of the library and changes in user practices at the Biblioteca dell'Istituto Superiore di Sanità, Rome, the most important biomedical library in Italy. Botha (Chapter 15) recounted issues concerning access to the internet in Africa and summarized the steps being taken to allow students access to a virtual library (ADL) that is available to inhabitants of Africa, free of charge. The final paper (Moen, Murray and Lopatovska, Chapter 16) within this theme provided an overview of the Library of Texas Resource Discovery Service, its development and current status. Usability issues of such resource discovery services were identified and possible approaches for improving and optimizing user and search interfaces were suggested.

In the fourth theme of the conference the focus was on designing the information environment from national and institutional perspectives. Williams (Chapter 17) presented an institutional perspective on designing the information environment. This consisted of elements in which the context of library electronic development at Manchester Metropolitan University (UK) was described; the meaning of the information environment at the university was articulated and the value chain model illustrated. Current and future innovation in creating the university library information environments was demonstrated and links were drawn between the UK national and university perspectives. Proença and Nunes (Chapter 18) presented the findings of an evaluation study undertaken at the University of Sheffield aimed at investigating the use of internet services by Portuguese public libraries that are members of the Portuguese National Network of Public Libraries. The paper identified the current state of the web presence and services of Portuguese public libraries and reported on the impact of disintermediation. The paper also presented a critical review of how these libraries were meeting the challenges presented by the information society. From a national perspective, Öhrström recounted the way in which Denmark's Electronic Research Library (DEF in Danish) changed from a five-year national project to a

permanent activity in 2003, fulfilling a vision of building one virtual research library in Denmark (Chapter 19). Wallis and Carpenter (Chapter 20) outlined the current and future information needs and user patterns of the UK academic research community based on the key findings from the national study *Researchers' Use of Libraries and other Information Sources*. The Research Support Libraries Group (RSLG) was established in 2001 with a remit to make proposals for a national strategy to ensure that all UK researchers continue to have access to world-class information sources. The final report was published in Spring 2003 (Research Support Libraries Group, 2003) with the recommendation to establish the Research Libraries Network, which was to develop, prioritize and lead a UK-wide strategy for research information provision.

The final theme of the conference focused on the creation of digital resources by user communities. The paper by Kelly and Butters (Chapter 21) described the EC-funded COINE (Cultural Objects In Networked Environments) project which is rooted in the idea of digital cultural heritage being driven by these user communities. It embraces the possibility of a 'two-way' flow of information and cultural heritage resources. The idea here is that no longer should it only be museums, libraries and archives that create the digital content for remote users, but these institutions should also present the opportunity for the users themselves to be active in this creative process using information technology to improve the sharing of and access to community heritage, collections and personal stories. Ashworth and Nixon's paper (Chapter 22) described the DAEDALUS project and its role within the context of a 'crisis' in scholarly communications. The paper detailed how research produced by higher education institutions in the UK is increasingly difficult to access, particularly by communities outside the system, and described one different model for dissemination of that research. Cox and Morris reported on a study of one online user community, using Wenger's concept of the 'community of practice' as a theoretical perspective (Chapter 23). The analysis suggested ways of evaluating such communities and measuring their value. It also clarified the challenge to librarians of supporting such informal, dynamic groups. The final paper, by Eales and Comrie (Chapter 24), explained the work of the JISC-funded Exchange for Learning Programme – a £4 million programme of projects providing tools, case studies and exemplar materials to help teachers and information professionals to locate, assemble, use and share learning materials of direct relevance to curriculum needs. The paper focused on one of these projects, Healthier Nation, which is looking into the use of accessibility metadata as part of its work.

There is significant evidence in the papers in this volume that the delivery of information services to remote users is occupying practitioners and researchers in library and information management across the globe. Key issues affecting the definition of the 'library' are being addressed and new models of information



service delivery are being developed. At this conference the elements of new 'mainstream' emerged, and in answer to the question posited by Brophy in his keynote paper, it is at this conference we might look to find models on which to build and aid understanding and development of the 'library without walls' of the future.

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## 2

### **Keynote paper: beyond the mainstream of library services**

Peter Brophy

#### **Introduction**

The ideas behind the Libraries Without Walls series of conferences, of which this is the fifth, can be traced back to a number of different roots. Some of these were concerned with the ways in which information technology might be used to deliver library services – and as such they go back at least to the early 1970s. Other ideas concerned the delivery of education, and especially experiments and services that sought to deliver to the learner rather than expecting the learner to come to an institution – distance learning concepts that can be traced back even further, and were well developed in many countries by the middle of the 20th century. Yet other concepts arose from beliefs in the importance of widespread participation in society and thus in learning, and the imperative to find ways to involve the disenfranchised. Draw these together – technology, delivery and universal participation – and the stage is set for new ways of thinking about library services.

One result of this kind of thinking was that by the early 1990s most libraries had come to accept that their role was better described as the provision of access to information sources than as the custody of physical artefacts – although of course there were exceptions, for example among national and highly specialist libraries. But as the access paradigm started to dominate, new methods of service delivery began to appear. The question became whether remote delivery, digitizing content, deploying electronic networks and exploiting the ever more widespread ownership of personal computers could offer a new way to think about, conceptualize and run the library.

It was at this point that the BIBDEL project was conceived. Funded by the European Commission's Libraries Programme it brought together three academic

libraries – those of the University of Central Lancashire (UCLAN) in the UK, Dublin City University (DCU) in Ireland and the University of the Aegean (UAe) in Greece – to explore the potential of electronic delivery of library services to distant users. The co-ordinating partner, UCLAN, worked with students taking university courses at small, remote colleges across the north-west of England. DCU, acting as a kind of open university for Ireland, identified a number of individual students who had access to their own computers at home or at work. UAe developed infrastructural services to enable island campuses to be linked and to share resources electronically.

It had been agreed that at the end of the project there would be an international conference to share results and to engage with a wider professional audience. Thus were the Libraries without Walls conferences born – the first in 1995 (Irving and Butters, 1996).

At LWW2 in 1997 (Brophy, Fisher and Clarke, 1998) it became clear that a considerable number of professionals were engaged in exciting new methods of delivery to distant users. While the topic might be a niche one, generally serving quite small numbers of students, it was growing in importance and many institutions were devoting considerable resources to it. We had not yet detected the important insight that it was the *library* that was remote, rather than the user, but this kind of thinking was starting to influence service development.

By 1999 the concept of a ‘library without walls’ had entered the mainstream of professional thinking (Brophy, Fisher and Clarke, 2000). The remarkable growth of web-based services, including library catalogues and a wide variety of information services, coupled with the seemingly unstoppable rise of Google and other internet search engines, meant that users increasingly expected desktop delivery of library services. In other words, the library was becoming just one of a range of services that students and other users drew on. The imperative was the integration of these IT-based approaches with the traditional library service – while trying to integrate them with other desktop environments that were not designed with library services in mind. In the UK this was the era of ‘hybrid library’ experiments (see, for example, Breaks, 2001).

The fourth Libraries Without Walls conference, in 2001 (Brophy, Fisher and Clarke, 2002), reflected that ‘the topic of library services to remote users . . . has now become a matter of widespread interest and concern’ (Brophy, 2002a). Information and communications technologies (ICTs) were by now almost universally adopted, so that more and more users were accessing services remotely. The conference organizers chose the theme ‘Driving the mainstream’ to reflect the way in which the needs of users who were outside the library building were now a principal driver for the development of all new library services. In her keynote address, Liz Burge urged delegates to confront this new situation by:

- thinking sideways
- thinking creatively
- thinking critically
- thinking transformatively (Burge, 2002).

The conference attracted a number of papers describing case studies of the application of new approaches and new technologies, while a few papers began to debate the theoretical basis for what was being seen by some as a fundamental shift in the purpose of the library – if it has a future at all.

## **Libraries Without Walls 5: beyond the mainstream?**

So we come to the fifth conference. The organizers have again set out themes they believe summarize key issues that we are facing as a profession. In brief these are:

- the integration of library services and virtual learning environments
- the relationship between user needs, information skills and information literacies
- usability and accessibility of digital library services
- designing the information environment: national and institutional perspectives
- the creation of digital resources by user communities.

I want to suggest that these headings can give us a single, challenging, theme to consider – and that is that the ‘libraries without walls’ concept has moved ‘beyond the mainstream’.

In the reminder of this paper I will try to suggest where we might find promising lines of enquiry to pursue, using the conference themes as headings.

### ***The library and virtual learning environments***

It is striking that the concept of learning dominates a great deal of debate at national and international level, and not just among public bodies. The idea of the ‘learning organization’ has been around for a long time now (for example Pedler, Burgoyne and Boydell, 1991) and has proved popular among commercial and industrial organizations. National policies frequently stress the importance of skills development and more general learning to economic prosperity, while other contributions stress that social cohesion and cultural identity are dependent upon the ability of citizens to become lifelong learners. In educational institutions we are seeing the widespread adoption of virtual learning environments. These provide a rich, technology-based environment that is particularly conducive to distance learning, including elements of time-shifting, which may be attractive to

those with a busy lifestyle, for example part-time learners, such as those in full-time work and single parents.

Librarians have noted the need to integrate information resources into these virtual learning environments (VLEs). However, it is arguable that we have not yet grasped the full impact of these approaches. The pedagogical theories that are underpinning current educational practice do not always find their way into delivery of services in libraries. I have argued elsewhere that libraries have a tendency to approach learning from an objectivist point of view:

[objectivism] views the world as an ordered structure of entities which exists and has meaning quite apart from the observer or participant. Much of science and technology is taught on this basis: what needs to be achieved by learning is a closer and closer approach to complete (and thus 'correct') understanding . . . in this understanding 'the goal of instruction is to help the learner acquire the entities and relations and the attributes of each – to build "the" correct propositional structure' (Duffy and Jonassen, 1993, 3) . . . very often an underlying assumption of information and library service delivery can lie very much within this frame of reference – references to 'bibliographic instruction', for example, reveal an objectivist approach in which the student is instructed in the 'correct' view of the world – perhaps that devised by Melvil Dewey! (Brophy, 2001, 136)

Or, perhaps more graphically:

Take young children:

- Open up the tops of their heads
- Pour in all the information they are ever going to need to know to get along with life
- Continue as long as possible – for 12 to 20 years

Now let them loose upon society, to spend the next 60–80 years as productive citizens, never having to be educated again. . . . A very simple scheme, practiced by nations throughout the world (Norman, 2001).

Have we yet taken on board the challenge of alternative constructivist approaches to learning? Bednar and his colleagues present the argument:

learning is a constructive process in which the learner is building an internal representation of knowledge, a personal interpretation of experience. This representation is constantly open to change, its structure and linkages forming the foundation to which other knowledge structures are appended. Learning is an active process in which meaning is developed on the basis of experience. This view of knowledge does not necessarily deny the existence of the real world . . . but

contends that all we know of the world are human interpretations of our experience of the world. ... learning must be situated in a rich context, reflective of real world contexts for this constructive process to occur (Bednar et al., 1993, 19).

So the question that we have to ask is, how does the library support and enhance the rich context in which constructive learning takes place? Do we have sufficient understanding of the process of learning to design our contributions to the VLE?

### ***User needs, information skills and information literacies***

There are a number of linked questions that are subsumed under this heading. The first is whether librarians have yet, despite a considerable number of studies, developed sufficient understanding of the needs of users. Although there has been excellent work in the past, for example by Dervin (1976), Kuhlthau (1991) and Wilson (1999) – see also the excellent recent overview of information seeking needs and behaviour by Case (2002) – we have in recent years entered a new age of networked information in which user needs may be quite different. Most obviously, we are now in an era of information plethora, in which a major problem for most users is information overload. Students, for example, may be more interested in finding any one resource from among the many that can support a particular task, rather than the definitive paper or a comprehensive list of everything published on the topic. Furthermore, all of our users are bombarded with a wide variety of information sources, such as e-mail (including discussion lists), alerting services of various kinds, and services such as news feeds delivered via portals. Libraries have traditionally concerned themselves with only a subset of the information resources now widely available. Do we know how the material that we wish to deliver to our users fits into this overall information landscape?

A related question, although the relationship is not often made explicit, is why there are so many non-users of libraries. Public libraries have shown particular concern about this in recent years, not least in reaction to statistics showing, in some countries including the UK, that the number of books issued is in fairly rapid decline. A similar trend can be found in academic libraries, where the number of physical visits to the library is declining. Clearly one of the reasons for these trends is that there is more use of the virtual library, and libraries' very success in delivering resources electronically is bound to have had an effect on visitor numbers. But, leaving this issue aside, it is still clear that many people manage their lives, including their learning, with very little recourse to formal, library-type resources. There is a need for a systematic research to explore this question further in the current, ICT-rich context.

Still within this general area, we also need to ask whether our users, or potential users, are being disadvantaged through a lack of appropriate skills and literacies.



There is now a very considerable literature on information literacy and information skills, but as yet little on how information and other kinds of literacy are related. Undoubtedly there are aspects of information literacy that are covered in other approaches. For example the European Computer Driving Licence (ECDL, [www.ecdl.com/main/index.php](http://www.ecdl.com/main/index.php)) contains some elements of information handling. The concept of functional literacy, which is used by the United Nations as a Human Development Indicator ([www.undp.org/hdr2003/indicator/indic\\_29\\_1\\_1.html](http://www.undp.org/hdr2003/indicator/indic_29_1_1.html)), also contains elements of information skills, for example the ability to read and interpret the instructions on, say, a bottle of medicine. In seeking to place information literacies in this broader context we also need to consider whether these, and other literacies, are best understood as ‘situated’. By this is meant, does the literacy required to operate effectively depend on the situation in which the individual person finds him or herself? To what extent can these literacies be transferred from one situation to another? Are we justified in assuming that information literacies are generic?

### ***Usability and accessibility***

In CERLIM we have long had an interest in the accessibility of information resources to blind and visually impaired people (see, for example, Craven and Brophy, 1999). In a real sense this issue is simply one aspect of the broader concern to ensure the usability of information services, although we believe that disabled users have a right to special consideration. The subject of usability has a huge literature, with contributions from many different disciplines including human-computer interaction, psychology, graphic design and language engineering. But in essence it is the science of fitting system functionality to user needs – so again it helps if we understand what those needs are. The work of Jakob Nielsen, perhaps the leading usability ‘guru’, has provided inspiration for many designers. As he said in a recent publication,

Usability is a quality attribute that assesses how easy user interfaces are to use. . . .

Usability has five quality components:

- Learnability: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- Efficiency: Once users have learned the design, how quickly can they perform tasks?
- Memorability: When users return to the design after a period of not using it, how easily can they re-establish proficiency?
- Errors: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- Satisfaction: How pleasant is it to use the design?’ (Nielsen, 2003).

Using this definition we can see that usability is closely linked to user satisfaction, a topic that has received considerable attention in the professional literature of librarianship. What we have not achieved, so far, is an integrated approach that links together initiatives such as the Association of Research Libraries' LibQUAL process (ARL, 2003) with library system design. Forging this link could help us deliver more services more appropriately.

### ***Designing the information environment: national and institutional perspectives***

It is now clear that very few libraries are able to operate as independently as they have in the past. While there has always been a measure of co-operation between libraries, for example in the deployment of interlibrary loan services, the advent of network services, where a single database may provide access for libraries and their users worldwide, introduces a new imperative for collaboration. We need to ask ourselves which services should remain essentially local and which should be planned, and perhaps delivered, regionally, nationally or internationally. Because these services are shared and because they sit alongside other similar services a critical issue is that of interoperability. The only way in which it is likely that we will be able to assure the required level of interoperability is through the adoption of an agreed standards framework. Over the past few years libraries have become used to the need for adherence to technical standards, for example through the use of Z39.50 for search and retrieval, but this activity needs to move up to a new plane. Not only do we need a much more complex framework for libraries to work within, but that framework has itself to interoperate with those providing kindred services such as VLEs. Nor is this solely a technical issue. We need to determine the appropriate economic and service models that will enable us to provide integrated services that enable our users to operate without detailed knowledge of each of the underlying datasets. At a conference such as this, it is also appropriate to ask whether new models are needed in order to secure international collaboration.

### ***The creation of digital resources by user communities***

The final theme of this conference suggests that libraries need to develop services that enable and encourage users not simply to be passive receptors of information, but themselves to create new information and other objects that they can share with their worldwide community. In CERLIM we are currently leading a European Commission funded project called Cultural Objects in Networked Environments (COINE), which is developing software to enable ordinary citizens

to tell their own personal stories, embedding images or other digital objects (Brophy, 2002b). They will then be able to publish the stories either within a local domain or for a worldwide audience. In this way the library's role ceases to be that of an endpoint in the information chain but rather becomes the mechanism that 'closes the loop', linking information access and use back to information creation and publication. By enabling ordinary citizens to express their creativity the library can find at least part of its new role within the networked society. The COINE project is described in greater detail in one of the conference papers (Kelly and Butters, 2004).

## Conclusion

The mainstream of library professional practice needs to move in new directions if a viable role is to be found for the future. New models of the library are required. McLean and Lynch (2003) have suggested that what is needed is 'a conceptual shift away from a traditional systems architecture viewpoint to one where applications become defined by the services provided and the services that can be accessed'. We should perhaps go even further than this. In a recent CERLIM report we have written that what is required is 'an architectural design which is driven by the tasks and activities which users perform or wish to perform' (Brophy et al., 2004). Taking this viewpoint will help us to contribute to the continued relevance of libraries and to define new kinds of service, which we may hope the mainstream of professional practice will adopt, adapt and make its own.

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## **Theme 1**

The integration of library services and virtual learning environments



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# 3

## **Staff without walls: developing library and information staff for e-learning**

Coral Black and Sue Roberts

### **Introduction**

Recent research and case studies have predominantly focused on the integration of resources into virtual learning environments (VLEs) or on the development and adaptation of services for the e-learning environment. This paper argues that such integration presupposes the successful development of library and information services staff, with awareness, new skills and new roles simply a given. The findings of the *Investigating Portals for Information Resources and Learning* (INSPIRAL) report (Currier, 2002) point to new staff development needs and the emergence of new roles and more complex teams in response to the e-learning imperative. However, these issues have not been explored and articulated in any great depth or detail. Staff development within this context is a significant challenge and requires creative and flexible approaches that are not simply based on technology or competencies. This paper discusses the current e-learning context in relation to staff roles, the skills required and potential staff development strategies, with a particular focus on one case study where e-learning and e-skills are embedded within the staff development life cycle. The paper argues for a lifecycle approach rather than 'one off' training sessions, and explores the characteristics of an appropriate learning environment – both real and virtual – to support and develop staff in such a demanding context.

### **Context**

#### ***E-learning and UK higher education***

E-learning has rapidly become an integral feature of UK higher education whether for distance or blended learning approaches or as a supplement to face-to-face

learning. Library and information services staff became involved in e-learning initiatives and developments at an early stage in some institutions. While this is far from consistent either within or across higher education institutions, staff are undoubtedly becoming increasingly involved in e-learning at all levels, for example in the discovery and embedding of electronic resources, design of materials, e-support and tutoring. Allan's (2002, 1) judgement that 'E-learning is becoming an increasingly important approach to user education, information literacy and also staff development' can now almost be viewed as an underestimation of the pervasive impact of e-learning. Such developments could also potentially lead to a crisis in library and information services management. Student and academic staff expectations are beginning to stretch the limits of services, resources and roles, with support and resources demanded via the VLE when required regardless of time or place. As users increasingly use VLEs their expectations of what technology can achieve also increases, with the gap between expectations and the resources available ever widening. Martin (2002) convincingly argues that it is not simply a resources gap but a skills gap: 'there is a pressing need to increase the . . . knowledge and skills base of all staff'.

This scenario of a crisis of expectation becomes positively utopian in comparison with the contrasting scenario where library and information services are bypassed completely. In the e-learning environment 'many of the established mechanisms that were once in place to support teaching and learning have been compromised, or overlooked . . . In many instances this has included the library' (Fletcher and Stewart, 2001, 213). As Fletcher and Stewart reassure us, 'it does not necessarily have to be like this', but we must shift from 'the traditional role of support to one that is active, adaptable and "in-your-face"'.

### ***E-learning and library and information staff roles***

From the Follett and Fielden reports of the 1990s (JFCLRG, 1993a; 1993b) a body of literature has emerged that has focused on the changing roles of the academic librarian, especially in relation to information and communications technologies (ICTs), networked learning and learning and teaching. For example, Stoffle (1996) and Stoffle et al. (2000) argue for the need to develop strategic partnerships and engender a broader educational role and Burge, L. (2002) discusses the need for library and information professionals to become consistently proactive educational partners. The most significant research on professional roles and ICT, pre-empting the emergence of e-learning as a major factor in role transformation, is Fowell and Levy's work (Fowell and Levy 1995; Levy, 1997; Levy, 1999) on networked learner support. Taking their cue from Follett and Fielden, they reflected further on the impact of the electronic library and the new educational spaces created by local and global networks. While pointing to the