

Information Specialists of the Future : Professional Development and Renewal

Sheila Corrall

Aston University Library & Information Services,
Birmingham, United Kingdom



Sheila Corrall worked for five years in the public library sector and ten years at the British Library before joining Aston University in January 1991. She is Vice-Chair of the Library Association Personnel Training and Education Group and of the Institute of Information Scientists External Affairs Committee, a member of the Executive Board of the Standing Conference of National and University Libraries and of the Information Services Sub-Committee of the Higher Education Funding Councils' Joint Information Systems Committee. Her current professional interests include strategic planning, management development, organisational culture and professional ethics.

Abstract

The electronic library and networked information services have prompted a review of the roles and responsibilities of information professionals. The technical demands of the job are expanding and at the same time a wider set of management and business skills will be required as the focus shifts from providing information to facilitating access for end-users. The implications for education and training are significant and continuing professional development has become more important as the pace of change quickens and environmental factors exert pressure on financial, physical and human resources. Flexible responses will be essential to meet the needs of the 21st century.

Some commentators predict the demise of the information professional, others envisage an enhanced role, emphasising the expertise required to assess the cost-effectiveness of different options for information delivery. Survival of the species will depend on competence, commitment and capacity for change. The knowledge, skills and attitudes required must be fully understood by all, and both organisations and individuals have to take responsibility for creating a framework for growth. Management development has become a strategic priority for all types of library and information services, and education and training providers need to devise new programmes to develop "Information Superprofessionals" for the Information Superhighway.

Context

The advent of the electronic library and developments in networked information services have prompted a comprehensive review of the roles and responsibilities of information professionals. The environmental pressures affecting the library and information community are well known and have been fully documented elsewhere, notably in three seminal reports published in the UK during the past year.^{1,2,3} The trends identified include not only technological issues, but also economic, political and socio-demographic factors. Consideration of the impact of these developments has tended to concentrate on academic and research libraries, but there are significant implications for all types of library and information services (LIS). The issues also extend beyond LIS, as information management is becoming a major corporate concern, and beginning to be recognised as an important strategic issue for organisations in both public and private sectors.

Information technology (IT) developments continue to dominate our landscape: the rapid pace of developments in networking technologies and multimedia systems (for example) is quite astonishing. The continuing rise in the world's published output is complicated by the multiplicity of formats emerging, again influenced by IT developments. At the same time, the demand for information is growing, costs are surging upwards relentlessly at a rate significantly higher than general inflation, but LIS budgets are increasingly constrained. Political pressures have forced LIS managers to work hard for their diminishing share of organisational resources; they have become more accountable for their actions and spending decisions, and

have to demonstrate value for money to their parent institutions and funding bodies. Quality has become one of the current buzzwords, with consumer choice a critical issue, and the customer base itself has become more diverse as a result of demographic changes. IT has also played its part in the globalisation of our environment, as computing and telecommunications technologies enable, indeed oblige us, to look beyond local and national provision and to acknowledge that we must become actors in the international arena.

The key points to note here are the complexity of the current situation, the fact that the pace of change is not easing but accelerating, and that we must expect these pressures to continue. Of particular significance is the growth in information supply and demand, the diversity in information products and services - and also among existing and potential customers - and the organisational imperatives to deliver relevance, quality and cost-effectiveness. Organisational scrutiny of information systems and information management has put the spotlight on the relationship between libraries and other information-related activities, so we see blurring of boundaries and confusion of roles between LIS and other functional units. A recent informal survey of UK universities showed that some degree of administrative 'convergence' between libraries and computer centres had taken place in about half of the institutions, with 38 (around one third) having a single executive director for the two previously separate services.⁴

Crisis of Identity

The LIS profession seems to be suffering from some sort of identity crisis. As we speculate about our future, the urge to redefine our role is overwhelming, and the range of names offered by commentators is impressive. Here are a few recent examples taken from the professional press:

- electronic library
- library without walls
- networked library
- desktop library
- logical library
- virtual library
- information nerve centre
- information management centre
- Information to Knowledge Advisory Centre (InfoKAC).

The names advanced for information professionals are even more interesting, and there are more of them:

- reference/subject librarians
- information resource managers
- information co-ordinators
- information linking agents
- information/knowledge managers
- information/knowledge navigators
- corporate intelligence professionals
- information consultants
- information counsellors
- information architects
- information engineers
- access engineers
- information catalysts
- cybrarians.

The common theme here is the attempt to reposition ourselves and signal through the change of title that we do more than simply provide information in response to demand.^{5,6}

Transformations

There is a serious point underlying this play with words. Libraries are undergoing a series of transformations, and the total effect of these changes amounts to a revolution in the way we deliver our services, our whole philosophy of service, and how we are organised. We are experiencing big shifts in our customer orientation, and it is not only our systems which are moving from standalone to networked - our people need to be organisational networkers, effective at communicating and liaising with customers and suppliers. To achieve this we need different structures and looser controls; more authority and autonomy for people who design, develop and deliver services; new styles of management and teamworking, and active involvement of everyone in the planning process.

Service development

Changes in technology, funding and information provision have forced us to reconsider service models. The move from a holdings/ownership strategy to an access strategy can be traced back over the last two decades as rising

literature costs and budget pressures have put public and academic libraries in a situation where self-sufficiency is clearly an untenable goal. Commercial and industrial information services have traditionally adopted this model, but universities have been reluctant to abandon their collection-building ambitions, having tended to equate quality of service with volume of holdings. The shift from print to electronic sources has encouraged progress in this direction and coupled with continuing scrutiny of the efficiency and effectiveness of service provision has brought about a significant change in service philosophy. The whole ethos has changed from a passive/reactive stance to a more proactive outlook, which assumes an understanding of client needs and the flexibility to deliver information 'just in time' - rather than the acquisition of material 'just in case'.

End-user searching and networked access to electronic information systems have also altered the balance of service from providing information to facilitating self-service access. These trends have wider implications which extend beyond adopting a more customer-oriented approach as they presume the ability to transfer information handling skills to end-users; they also pose more complex questions about the evaluation of numerous different products entering the market, about copyright and licensing arrangements, and about funding and charging mechanisms. There is more scope for customisation - tailoring services to the needs of particular groups or individuals - but LIS managers have an important role in ensuring cost-effective provision for the organisation as a whole, and will need to strike the right balance between supporting and empowering clients and exercising professional judgement on their behalf.

Structures and styles

Many people have pointed out that traditional hierarchies impede flexible responses to new problems. Lee argues that we must not only redefine our role, but redefine our organisation for carrying out that role. Structures supporting change will be cross-divisional and cross-functional, encouraging "fluidity of boundaries", creating "multiple ties and relationships [that] will crisscross the organization chart". People will operate within a complex network of vertical, horizontal and diagonal relationships. We shall still need properly defined jobs and clear reporting lines, but multidisciplinary teamwork, cross-functional task forces and "dotted line reporting relationships" will become the norm. Flat structures and matrix management arrangements are already fairly familiar ideas, but Lee goes beyond this to "the

concept of a second organization, a parallel or shadow organization that links the separate units of the maintenance-oriented organization in flexible shifting ways to solve problems and guide changes".⁷

Different management styles and skills will be needed in this new environment, with a shift from managing individuals to managing teams, and an emphasis on developing the resources of the group rather than controlling it. Lewis presents a comprehensive and cogent case for getting rid of "the stifling effect of the controlling and co-ordinating mechanisms on our service goals". He urges that reference librarians/information specialists be given the authority and autonomy to take decisions and allocate resources to meet customer needs. Managers must assume the role of "managing partner" rather than supervisor, concentrating on managing decision-making and communication processes - not determining strategies in top-down mode, but facilitating participative planning, involving all levels of staff in a more fluid middle-up-down process.⁸

Competencies

There have been several attempts recently to identify the competencies required of information professionals in the future. In 1991, Woodsworth and Lester examined the staffing needs of a model future research library in order to inform curriculum development for the professional education of library and information specialists. Their work drew on the published results of three previous surveys, as well as the expressed views of prominent members of the profession, and they concluded that the latter offered more useful guidance and that dialogues involving the best futuristic thinkers among both practitioners and educators were most likely to provide the basis for sound strategic planning.⁹ In a more concise treatment, Ojala sets out her views of the requirements for managing the special library of the future, offering further references to support her conclusions, which are broadly similar to the earlier work.¹⁰

A key finding emerging from these investigations is the growing importance of 'organisational' competencies - more generic managerial abilities which are not specific to the LIS profession. Some writers go further and suggest that projected changes in society mean that information specialists will need to have an increased understanding of cultural diversity and the impact of a culturally diverse population on information behaviour, translating this into a need for increased interdisciplinarity in educational programmes, to

incorporate areas such as policy studies, communication theory and cognitive psychology.¹¹ The core competencies identified from these studies are summarised below.

Information (professional/technical) competencies

- Understanding of information sources and how to access them
- Knowledge of technologies and ability to deliver information in any format
- Ability to evaluate quality of information, and thus add value
- Ability to organise information to create customised knowledge
- Ability to anticipate and analyse customer needs (by monitoring)
- Ability to connect disparate pieces to originate new information
- Knowledge of when, how - and whether - to store information
- Understanding of the generation, transfer and use of information
- Understanding of economic and legal aspects of information

Organisation (managerial/interpersonal) competencies

- Understanding of the organisational environment, culture and alliances
- Expertise in the dynamics of teams/small groups in an online environment
- Ability to communicate using a variety of media throughout the organisation
- Ability to market and sell information products, including negotiating with vendors
- Ability to empower customers and guide them to a range of alternative sources
- Ability to develop, design and deliver instructional programmes
- Ability to operate effectively in the political arena, locally and nationally
- Ability to provide leadership and vision within the organisation
- Ability to force information to permeate the organisation

Adding value, creating 'customised knowledge' and originating new information are important concepts among the first group, as development of these abilities will surely help to distinguish the LIS professional's contribution from that of others including the competent end-user. The second group reflects the imperative for information professionals to be able to operate

effectively in the organisational environment, in particular to understand what the organisation is about and how it works; to be able to relate effectively to customers and other stakeholders; and to have the necessary knowledge, skills and insights to *enable customers to become competent* in finding, handling and managing information. They must also become 'information champions' within the organisation, and exert influence on the strategic use of information, which requires both political skills and personal confidence.

Convergence

One of the challenges we face at present is on the one hand to form effective strategic alliances within the organisation, and on the other hand to differentiate our contribution from other major players. Of relevance to this debate is the study by Woodsworth and others in the United States on the "information job family". Their research identified a list of common elements in the jobs of library and computing staff; the focus of the study was on academic libraries, but the findings are also applicable to other organisations. This work poses very interesting questions not only about roles and responsibilities, but also about professional education and qualifications, continuing development and training, and - probably most contentious of all - salaries and conditions of service.¹² The common job activities identified were as follows:

- Develop training tools and system documentation
- Design, operate and use local and wide area networks
- Plan, select and operate system hardware and software
- Collect and organise information in various forms and formats
- Create, maintain, query and manage databases
- Analyse user, service and system needs
- Provide consulting and technical assistance
- Instruct faculty, students and staff in all of the above

The authors also point out that in addition to the common activities, the two groups of staff generally had similar goals, described as "helping users to access, manipulate, or use information - in all its definitions - through the optimum use of hardware, software, and communications systems" (although they might use different terminology). The physical settings in which these activities take place are also becoming more alike, but significant differences in status and culture still prevail. One of the key findings of the

study was the central importance of human resource planning in the "informed" organisation, a point which has been acknowledged in the UK in the recently published Follett and Fielden reports.^{2,13}

Conclusions

Drawing the threads together and summing-up current thinking on the knowledge, skills and insights required of future information specialists, we arrive at the following set of attributes. Information specialists must have in-depth subject expertise, as well as broad organisational interests. Expanded technical demands mean that they must be able to cope with basic hardware problems, handle a wide range of software packages, establish network connections and navigational tools, and deal with queries on copyright and related legislation. Their roles of advisor, trainer and facilitator will necessitate instructional/teaching ability and strong oral and written communication skills. Responsibilities for operational management of tailored information provision will entail negotiating with suppliers and conducting cost/benefit analysis of the different options for information delivery (on-site holdings versus remote access, print versus electronic, standalone versus networked, etc.). Above all they must be 'change-positive' and comfortable with chaos, with a personal commitment to their own learning and development throughout their careers.

We are therefore looking at a much wider set of competencies than before, embracing professional and technical knowledge, interpersonal and training skills, and managerial and business insights. There are considerable implications here not just for staff development and training, but for organisational development - the concept of the 'learning organisation' - which will mean real cultural change for many LIS. In this context, Lee argues that we must not only become capable of transforming our institutions in response to changing situations and requirements, we must be able to invent and develop institutions capable of bringing about their own continuing transformation. "To do this, today's managers must develop an understanding of the assumptions, premises, philosophical postulates, intuitive insights, and logic of organizational development."⁷

Managers must develop managers: they must accept responsibility for developing themselves and others; they must act as role models, as well as actively developing their staff. On-the-job learning and regular structured in-house training programmes will be essential, and many libraries (such as

Aston University LIS) are already following the example of shops and other retail outlets by introducing a weekly 'training hour', opening their doors to customers later in the morning to provide at least one hour per week off-the-job training for all staff. LIS managers need to change structures and cultures in order to create a climate in which people can perform.

The boundaries between libraries and other support services will become increasingly blurred; they will shift over time, and may even disappear altogether. Professional education and qualifications are bound to be affected, and are unlikely to survive in their present form. However, we need not see these developments as a threat, rather as a big opportunity to move centre stage: we have a chance to enhance our role because we have a distinctive contribution to make, but we need to be able to put this message across effectively - and quickly.

If we succeed, then we can really claim to be the 'Information Super-professionals' for the Information Superhighway. Pitkin's scene-setting introduction to the published proceedings of the 1992 Computers in Libraries Conference offered the following characterisation of the future roles of Chief Information Officers - strategic planners, change agents, innovators, business managers, communicators, politicians, resource managers, co-ordinators, integrators, negotiators, and educators.¹⁴ All the evidence available suggests that information specialists at the *operational* level can and must fulfil these roles to provide a quality service. The opportunity to exercise our professional expertise at the corporate *strategic* level thus awaits us, and promises a bright and exciting future.

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