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The What? and How? of education and training for information professionals in a changing world: some experiences from Wales, Slovakia and the Asia-Pacific region

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Abstract

Following a description of the changing roles of library and information professionals, this paper will cover the issues of the What? and How? of education and training courses for such professionals, and the developments of distance learning programmes and virtual learning environments . Finally, case studies based on the author's experiences in education and training programmes in Wales, Slovakia and in the Asia-Pacific region will be described. Such courses are examples of attempts to ensure that current library and information professionals are well prepared to meet the challenges of the future.

1. Changing roles of library/information/knowledge professionals

In addressing the 25th Online Information Meeting in London in December 2001, Richard Harrington, the Chief Executive Officer of the Thomson Corporation noted that no profession had changed as much as the information profession had in the last five years with the development of the range of Internet-based technologies [1]. He outlined the added responsibilities that information specialists now have as workers in the “knowledge economy”; these include being:

- *information gurus* - and guardians of information quality and ensuring that users have access to information from the most trusted sources;
- *business managers* - and knowing how to deliver appropriate information services (either from inhouse or by outsourcing) to meet the needs of the users;
- *teachers/trainers* - to ensure that the users (and colleagues) know how to access relevant sources of information;
- *information advocates* - serving as the information “champion” for the organisation to influence management and ensuring that everyone in the organisation remains competitive by having the information and tools they need to make decisions faster;
- *system designers* - to develop and design appropriate systems for the delivery of information to their users in an appropriate manner.

Thomson is an organisation which now owns large numbers of information services and sources that we, as library and information service (LIS) professionals, use including Dialog, the Gale Group, Reed Elsevier, the ISI (Institution for Scientific Information), Derwent, Saur etc. Harrington was viewing the world of the LIS professional in a business or commercial organisation. However, since the mid-late

1990s many other authors, particularly in the academic and public library arena have also commented on the changing roles and the need for appropriate skills to deal with all the information and communications technology (ICT) developments and their effects on the services offered. For instance, in 1997 Hans Geleijnse, now of the European University Institute in Florence noted that, with the development of the digital library, LIS staff should:

- focus more on information management as the shift from access to ownership is inevitable;
- provide more emphasis on user support;
- provide more emphasis on user education and user training;
- create tailor-made services to end-users;
- support electronic publishing [2].

Biddiscombe in a paper delivered to the MicroLib 2000 conference in Lisbon, Portugal, outlined the role of the information professional in the information service (which provides library and computing services) at the University of Birmingham in the UK [3]. He sees information professionals as being those people who manage the conveyance, organisation and dissemination of information to an identifiable group of users in a professional capacity. These people comprise librarians, computer officers and web developers. Biddiscombe notes that the tasks of information professionals at Birmingham are to:

- understand the needs of users and endeavour to meet them;
- manage servers;
- manage e-mail and print accounts;
- populate and evaluate websites;
- select, organise and manage print and electronic collections;
- offer training and guidance;
- provide network support – both physical and social.

Staff in Information Services at the University of Birmingham have been involved in a number of electronic library projects, including the BUILDER hybrid library (see <http://builder.bham.ac.uk>). BUILDER was one of the projects funded as part of the UK's Electronic Library (eLib) Programme. The eLib Programme, which ran from 1996-2000, aimed to engage the higher education community in the UK in developing and shaping the implementation of the electronic or digital library. The 70 or so funded projects, from the budget of £20m or so, covered a wide range of areas including electronic publishing; access to networked resources; digitisation; training and awareness as well as digital preservation and large scale resource discovery [4]. In an article which discusses the challenges of managing electronic library services in UK higher education institutions, Pinfield highlights lessons that were learnt from some of the eLib-funded projects [5]. In relation to staff and skills he notes the following roles that library staff are expected to take on:

- *multimedia user* – comfortable with information in a wide range of formats;
- *intermediary* – with a good knowledge of sources and user requirements;
- *enabler* – proactively connecting users with information they require;
- *metadata producer* – creating records of information sources in a variety of schemas;
- *communicator* – formally and informally liaising with users;
- *team player* – working with colleagues in library, IT services and academics;
- *trainer / educator* – taking on a formal role to teach information skills and information literacy;
- *evaluator* – sifting free and paid for resources on behalf of users;
- *negotiator* – dealing with publishers and suppliers;
- *project manager* – leading on development projects to enhance the service;
- *innovator* – not just following the routine but also looking at improved ways to deliver the service;
- *fund-raiser* – working for greater income from the institution and beyond.

The roles of staff in public libraries are also changing. In the UK, as part of a commitment to delivering the benefits of lifelong learning to every citizen the Government has resolved to use ICT to deliver those benefits as quickly, as widely and as cost-effectively as possible. Public libraries, of which there are over 4,000, located in every community in the UK, have been placed at the centre of this commitment. As the then Minister of the Department of Culture, Media and Sport said in 1998, "*they are our street-corner universities*". Known as "The People's Network" the aim is to connect all public libraries to the Internet by the end of 2002 (see <http://www.peoplesnetwork.gov.uk>) so as to enable members of the community to:

- support their studies in school, college or university;
- learn for fun;
- pursue a hobby in a supportive and friendly environment;
- acquire new skills to improve job prospects or professional development ;
- find out information from local, regional and national government agencies;
- use email to keep in touch with family and friends;
- research their family history ;
- plan a holiday ;
- shop online.

The following funds have been committed:

- £100m for developing the network infrastructure;
- £50m for content creation or the digitisation of relevant resources;
- £20m for relevant training for all public library staff.

Defining the skills that public library staff in the UK would need in order for the realisation of the People's Network project was a key feature of the report on building the network [6]. As well as basic training for all staff the following roles were identified:

- *Net Navigator* – more advanced searching skills and use of alerting services
- *Information Technology Gatekeeper* – website development
- *Information Consultant* – analysis and diagnosis of users' needs
- *Information Manager* – digitisation issues, copyright, Intellectual Property rights etc.
- *Educator* – design and development of training courses and materials.

Batt provides an overview of the state of these developments in late 2000 [7].

2. The What? And How? of education and training for information professionals

2.1. What? – or curriculum issues.

It is very necessary that the developments which have resulted in the changing roles of LIS professionals are reflected in the curricula of the relevant educational and training courses. At the worldwide level organisations such as IFLA – the International Federation for Library Associations provides guidelines for the content of courses (see <http://www.ifla.org/VII/s23/bulletin/guidelines.htm>). At a regional level, there are organisations such as EUCLID – the European Association of Library and Information Education and Research (see <http://www.euclid.elt.sk>). EUCLID was formed in 1991 by a group of LIS educators and amongst its objectives were to:

- exchange mutual information about development in curricula and research;
- encourage support from stronger to weaker members.

An obvious manifestation of its work in fostering links between Western and Eastern Europe during the 1990s has been the series of BOBCATSSS conferences (see <http://www.bobcatsss.org>). BOBCATSSS is an acronym formed from the cities in which the institutions involved in its formation were based - Budapest, Oslo, Barcelona, Copenhagen, Amsterdam, Tampere, Stuttgart, Szombately, Sheffield. The annual conferences bring together staff and students (who are responsible for all the organisation related to the conference) from many LIS departments in Europe. In his

introduction to the 10th conference, which was held in Portoroz, Slovenia in January 2002 Vodosek outlined various developments towards the internationalisation of LIS education and called for LIS educators to work towards the following:

- sharing of experiences;
- discussion of standards and methods for quality assurance;
- agreement on methods of evaluation, accreditation and certification;
- resolution of the problems of equivalence and reciprocity of qualifications;
- cooperation in distance education. [8].

In the Asia-Pacific region work on developing a curriculum for the emerging information societies has been carried out under the auspices of Unesco's Principal Regional Office for Asia and the Pacific (PROAP) in Bangkok, Thailand. PROAP is the centre for a number of programmes covering Unesco's areas of involvement, namely, education, culture, social and human sciences and communication/information and informatics in the 44 member countries in the region and its work has been greatly assisted by support from the Japanese Funds-in-Trust (JFIT). In 1996/7 two meetings of experts (from Australia, Bangladesh, Fiji, Indonesia, Japan, Malaysia, Nepal, the Philippines, Thailand, the UK and Vietnam) took place which identified the need for a draft curriculum that could assist those developing syllabuses at the various training institutions for library and information science in the Asia-Pacific region. A framework for such a curriculum was developed based on:

Creation – the work associated with creating the information products and services that will be used in an information society;

Collection – the work associated with building collections of information, organising, maintaining and making them accessible for users;

Communication – the work associated with providing information services directly to users;

Consolidation – the work of supporting the management function in organisations by gathering information in response to specific requests, analysing it, and synthesising it into a form that can be assimilated easily to develop and produce information products and services [9].

2.2 How? or the delivery of education and training

In recent years there have been many developments in the use of open and distance learning, virtual and e-learning and so on to support education and training generally.

Rowntree, of the Open University in the UK refers to open learning as an all-embracing philosophy which places control and choice in the hands of the learner [10]. The approach takes a 'learner centred' view in which the circumstances and needs of the learner are paramount. It is often stated that an open learning approach enables people to learn at the time, pace and place which satisfies their individual circumstances and requirements. Distance learning is seen as a sub-set of open learning, which facilitates open learning across a distance through the use of pre-packaged learning materials and which usually employs a range of media for learning and teaching, for example, print, audio-visual and computer-based media. The Department of Information Studies, University of Wales Aberystwyth (DIS/UWA) has run distance learning courses for many years and in 1993 an Open Learning Unit (OLU) was created within the department to provide specialist advice and support in the creation of open learning materials. A wide number of undergraduate and postgraduate courses is offered via distance learning techniques and currently there are over 650 students from all over the world studying in this mode at DIS/UWA.

In many higher education institutions the concept of open learning is being embraced with the adoption of various managed learning environments (MLE) or virtual learning environments (VLE). Software, such as WebCT and Blackboard, have been developed to integrate online methods of delivering course material that can then be accessed on a 24/7 basis by the students as well as providing computer-based communication software (chat rooms, e-mail, bulletin boards etc.). Articles are beginning to appear about experiences in using this approach. Kendall, for instance, describes the development of a course on community information taught to full-time students at Manchester Metropolitan University in the UK [11]. There is an important role for library and information staff in institutions involved in using this technology and McColl outlines the work of the ANGEL (Authenticated Networked Guided Environment for Learning) project in the UK [12].

A survey of distance learning library and information science courses delivered via the Internet was carried out in 2000 by Tyler [13]. Fewer than ten fully online distance learning degree programmes in the LIS field were identified at that time although there was a large number of short online courses offered by commercial consortia and non-traditional universities found.

3. Case Study One: New Opportunity/Cyfle Newydd – distance learning materials for Welsh public librarians

3.1 Background

When it became evident that all public library staff needed to be trained as part of the People's Network in the UK several librarians in Wales came to DIS/UWA (as the only provider of library education in Wales) for assistance in their training programmes. Following a detailed discussion of needs and so on it was decided to develop a series of four open learning modules to be used by all staff in subscribing libraries and also to run a series of face-to-face one day workshops for middle-managers in the Welsh public libraries. By late-2002 over 800 open learning handbooks have been used by trainees and face-to-face workshops have been held for over 250 people.

3.2. What?

The report which outlined the building of the People's Network project prescribed the training outcomes:

- a grounding in core ICT fundamentals;
- understanding how ICT can support library staff in their work;
- health and safety and legal issues in the context of ICT ;
- knowing how to find things out on behalf of users;
- using ICT to support reader development activities;
- using ICT to support users to ensure effective learning;
- ensuring effective management of ICT resources in libraries;
- knowing how to use ICT to improve their own professional efficiency and to reduce administrative and bureaucratic burdens [14].

The “basic” ICT skills are being acquired by most authorities through some form of training for the European Computer Driving Licence (ECDL- see <http://www.ecdl.com>) which defines a syllabus of seven modules covering aspects such as word processing, spreadsheets, databases and so on. The DIS/UWA modules have been structured into the following four areas:

- Access to electronic information sources and services
- ICT, literacy and reader development
- Training the user in ICT and information skills
- ICT for resource management and professional development.

The exact content of each module was developed to meet the more detailed expected outcomes prescribed for the training programme. For instance on completion of the first module trainees are expected to be able to:

- be aware of the range of information sources that are able to be searched in an electronic environment and discriminate between them;
- understand how this information is structured into fields, records and databases;
- be able to search bibliographic databases;
- be able to construct simple search strategies;
- know how to evaluate the results of a search;
- appreciate how to provide suitable access to electronic information sources for those with special needs.

3.3 How?

Following a detailed analysis of the needs of the trainees, a decision was made to develop the modules to be used by all library staff using an open learning approach so that individuals and/or library authorities could fit the training programme to their

particular constraints. Each module comprises a workbook with printed material, Internet-based exercises and activities, a glossary of terms used and a supporting website. Each module has been designed to be completed within 15-20 hours, although this depends, to some extent, on the speed of connection from the trainee's workstation. All the modules include links to a large number of useful websites, many concentrating on Wales and Welsh issues, and so much more time could be spent exploring the issues further. Trainees work through the open learning modules at their own pace and individual library authorities are at liberty to decide how this is best organised. DIS/UWA suggested that it would be a good idea for each authority to have a "mentor" (or mentors) who acts as a local point of contact for an individual completing the module. To assist the mentors special mentor training sessions have been held and a mentors' training pack produced. Many people in Wales speak Welsh and extra funding has been received to translate the modules into Welsh so that those members of library staff who wish to can undertake the training in Welsh.

To date, the response from the trainees and their mentors has been very positive. In this case where there has been a major challenge of providing training for all staff (with no cover for staff if they attend training courses away) the use of distance learning materials has been very beneficial. The comment from one mentor stated: "*ability for staff to progress at their own pace is very important*" has been echoed by many others.

The one day face to face training workshops for middle managers working in public libraries in Wales have also proved to be popular. The workshops are limited to a maximum of 24 trainees at a time and comprise a mixture of lectures, group work, practical exercises on the computers and discussions.

4. Case Study Two: PROLIB project in Slovakia

4.1 Background

In 1997 a distance-learning course for the professional development of librarians and practising information specialists in Central and Eastern Europe at the ICIMSS (International Centre for Information Management Systems and Services) then based at Nicholas Copernicus University in Toruń, Poland was developed (see <http://www.icimss.edu>) [15]. One of the initial cohort of "students", a librarian at the Technical University of Kosice in Slovakia, realised that some of the topics covered would be relevant to colleagues in Slovakia. So, in March 1998, a proposal for funding was submitted to the European Union's (EU's) Tempus Phare programme. The resulting project, PROLIB, Professional Development Programme for Librarians, aimed to develop and deliver modules for the continuing professional development of librarians in Slovakia. EU-funded projects involve a number of partners and in the case of PROLIB there were several Slovak organisations involved as well as Lund University in Sweden, Library Development Consultants in London and DIS/UWA. The concept from the start was that the modules would be prepared in Slovakian by the Slovak partners in the project with advice from western partners and would be delivered using distance-learning techniques. About 180 Slovakian librarians have undertaken this programme of training [16].

The Open Society Institute (OSI) has been involved in a number of training initiatives in Central and Eastern Europe since the early 1990s. Its Regional Library Programme funded a series of 3-day workshops (and the author along with a colleague from Canada ran workshops in the Czech Republic, Estonia, Kazakhstan,

Romania and Slovenia) and a month-long summer school has been held for a number of years in Budapest [17]. The OSI has also funded work on updating some of the PROLIB course materials and has enabled further numbers of Slovaks to be trained.

4.2 What?

Prior to the setting up of the PROLIB project a number of training needs for Slovakian librarians were identified. These included:

- competence in the use of ICT in libraries;
- awareness of the influence of ICT on the management of libraries;
- understanding, managing and coping with change in libraries(political, sociological, economic, cultural, educational, organisational and technological).

A decision was then made that the courses would be structured into six “stand-alone” modules:

- Changes in libraries and the need to manage change
- Customer care in libraries
- Management implications of IT in libraries
- Internet and new information technologies in libraries
- Digital libraries
- Electronic publishing

4.3 How?

The delivery of the modules followed a similar pattern to that adopted by ICIMSS and comprised a one week long face-to-face course followed by three months of computer-mediated distance learning for the participants. Trainees were expected to spend 140 hours on each module of which 24 hours were spent at the residential face-to-face courses, 80 hours on self-study of the printed materials and 36 hours in preparing the assignments and taking part in the distance-learning activities.

A self-study workbook was prepared for each module. These workbooks were structured and written in a “user-friendly” way that helped the trainees make sense of the subject content. Learning objectives, summaries, exercises and feedback were provided so that the trainees could chart and check their own progress. In order to overcome potential isolation the trainees were encouraged to keep in touch with their “class mates” via electronic mailing lists which enabled group discussions between the trainees and the module instructor. In addition the trainees were supported by an academic instructor who provided feedback every two weeks or so on the assignments.

The development and delivery of these modules was carried out by staff from three of the Slovak partners in the project with assistance from the non-Slovakian partners who were each allocated responsibility for specific modules. In September 1999, the 21 Slovaks who were to develop and/or deliver modules came to DIS/UWA for a week-long intensive ‘Training the Trainers’ course run by staff from the OLU [18]. The course developers/lecturers consisted of university teachers in particular subject areas and library management, information and technical staff.

Some of these people had little, if any, experience of teaching, and had also had very little previous professional involvement with educational issues.

5. Case Study 3: ICT for library and information professionals: a training package for developing countries from Unesco

5.1 Background

Following on from Unesco's work in the Asia-Pacific region on curriculum development referred to earlier [9] a number of individual training courses were held (for instance in Lao, Mongolia, Papua New Guinea, the Philippines and Vietnam). However, some form of package to assist with training in ICT in libraries and information centres in the region has been considered for some time by Unesco and JFIT. To assist in this process a week-long meeting of 10 experts (from Canada, Estonia, Fiji, Indonesia, Japan, the Philippines, Thailand, the UK and the USA) was held in Indonesia in March 2000 [19].

5.2 What?

The resulting framework for a training package comprises six modules:

- Introduction to integrated library systems
- Introduction to information and communication technologies
- Database design and information storage and retrieval
- Information seeking in an electronic environment
- The Internet as an information resource
- Web page concepts and design

5.3. How?

In this instance the aim was to produce a "package" of materials for both trainer and trainee that could be used, as appropriate, in different countries. It is anticipated that each module will take five days to complete, using a mixture of instructional techniques – lectures, demonstrations, hands-on practice, case studies, group discussions, and site visits as appropriate. The modules are designed to be self-contained so that they can be taken independently of each other although some modules may have other modules as a pre-requisite. Each module is accompanied by a comprehensive information package that can be used by the trainer both to plan and conduct the training course. This includes a detailed curriculum together with any other required training materials such as case studies, computer exercises and discussion topics. Learning outcomes and course outlines were developed for each module. The language of the module content and the instruction is English.

An initial version of the first two modules were developed and tested in courses in Indonesia and Sri Lanka during 2000. A further meeting of the experts (also including experts from Australia and Sri Lanka) was held in Thailand in 2001 and considered the evaluation of these first modules and more detailed content for the subsequent modules. The final package has been produced, under contract to Unesco, by colleagues in the Philippines and in Sri Lanka and Canada. All modules were completed in mid-2002 and are available on the Web (see for instance the module The Internet as an Information Resource -

<http://www.unesco.org/webworld/publications/ictlip5/>) and in printed package form [20].

6. Conclusions

Library and information professionals all over the world are being affected by a range of ICT developments and so find their roles changing. What is amazing is that the needs of these professionals working in either rural libraries in Wales, or in academic libraries in Slovakia or in government libraries in the Asia-Pacific region are similar in many respects.

In developing education and training materials for information professionals in a changing world it is important to:

- take care to assess the users' needs carefully before developing any education or training programmes;
- ensure that a method of evaluating the training programme is in place;
- appreciate that distance learning programmes can be an appropriate solution for training information specialists;
- take care in the use of new features/facilities of software support packages and ensure these are used appropriately – rather than just because they are there;
- endeavour to include examples of information sources etc. that are relevant to those being trained/educated;
- ensure that procedures are in place for regular amendment/update of material based on user feedback and on developing technologies;
- appreciate that e-learning approaches need to have appropriate support mechanisms to compensate for the lack of face-to-face communication;
- include appropriate feedback for any online exercises;
- provide a certificate for those who have “progressed” satisfactorily through the programme.

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Note:

The author is co-ordinator within DIS/UWA for the New Opportunity/Cyfle Newydd training programme. She was also the DIS/UWA representative on the PROLIB project and was the sole representative from the UK on the Unesco panel of experts.

This paper is based on a presentation made by the author at the World Library Summit in Singapore, April 2002.