European Curriculum Reflections on Library and Information Science Education

Edited by Leif Kajberg and Leif Lørring

The Royal School of Library and Information Science, Denmark

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The Royal School of Library and Information Science.
Copenhagen 2005.

Preface

European Curriculum Reflections on Library and Information Science Education is the preliminary conclusion of a project inspired by curriculum discussions on the Bologna Declaration that was initiated at a EUCLID conference in Thessaloniki 2002. EUCLID (European Association for Library & Information Education and Research) is an independent European non-governmental and non-profit organisation existing for the purpose of promoting European co-operation within library and information education and research.

Hopefully, the present book will only be part of the beginning of a new and ongoing curriculum debate and more intensive co-operation between the European schools in the field of Library and Information Science (LIS) in the coming years.

The project is kindly sponsored by EU's SOCRATES programme. Without financial support from the EU, it would have been impossible to carry out the project.

About 150 colleagues in the field of LIS education from all parts of Europe have been contributing to the preparation of the book. A virtual discussion phase with hundreds of dialogues was followed by a working seminar where some 40-50 colleagues convened in 12 groups identical to the book chapter titles and worked on the manuscript for the book.

In many ways, this project may be looked at as a rather new way of producing a book because of the involvement of so many colleagues writing their reflections on 12 classic themes in the curriculum of a European LIS school.

We want to express our warm and hearty thanks to the EUCLID board and all the participating European colleagues for their enthusiasm and constructive way of co-operation.

The Royal School of Library and Information Science
December 15th 2005

Leif Kajberg and Leif Lørring

Content

Introduction

Background

It is only during recent years that European LIS schools have participated in joint meetings enabling them to take a broader European approach to themes of mutual interest. Three recent events should be mentioned in this context: The international seminar on "Internationalisation in Library and Information Studies" in Parma (2002), the EUCLID (European Association for Library & Information Education and Research) Conference on "Restructuring and Adapting LIS Education to European Standards" in Thessaloniki (2002) and the meeting on "Coping with Continual Change – Change Management in Schools of Library and Information Science" organised jointly by EUCLID and its North American counterpart ALISE (Association for Library and Information Science Education) in Potsdam (2003). During these conferences it became clear that the thinking underlying the structure and contents of LIS courses vary very much between the different types of LIS education providers in Europe, which include many fairly small academic environments.

In some, but relatively few European countries, the implementation of the Bologna Process with its 3 + 2 + 3 overall academic sequence has gradually replaced a more conventional practice-oriented and profession-centred LIS education prototype, typically of four years' duration including more or less comprehensive elements of practical training. In other European countries, LIS-specific education is provided either by university departments or by "profession schools" with considerably differing curricula. In yet other countries, there are examples of very practice-oriented courses still emphasising the apprenticeship approach and with the theoretical elements of the curriculum offered as course units and modules of varying duration.

But the overall view is lacking and transparency and equivalency suffer. The apparent disparate nature of LIS educational programmes in Europe constitutes a barrier to increased co-operation in the field. There is a marked need for joint discussions of the structure and contents of LIS school curricula and for identifying and discussing possible common curricular elements both for the purpose of enhancing the quality of individual LIS educational programmes and for the sake of increased collaboration between European LIS school programmes.

European Curriculum Reflections on Library and Information Science Education is an attempt to at least partly solve some of the problems mentioned.

The uniqueness of the book

Sponsored by the European Union, the *European Curriculum Reflections on Library and Information Science Education* is the result of a rather unique process.

The material for the book was initially developed on the basis of hundreds of virtual dialogues between about 150 European colleagues in the field of library and information science (LIS) education during spring and summer 2005. The virtual phase was followed by a working, discussing and writing seminar in Copenhagen in august 2005 with the presence of more than 40 specially selected LIS educators from countries all over Europe – north, south, east and west.

Thus, the book is directly inspired by discussions covering a very broad spectrum of views, perspectives and backgrounds from many different European LIS educational environments and many different European library systems.

There have been quite a few conferences and seminars in European LIS education over the years, but the structured and outcomes-oriented approach has generally been lacking. Typically, the programme of such conferences has been compiled on the basis of a call for papers. This rather conventional approach has left the initiative with those sending in proposals for papers. In preparing for this book, no call for papers was made. Instead, participants were required to prepare a piece of collective work during the conference within a thematic context and according to a set of guidelines specified by the organisers and including the virtual discussion groups at the pre-conference stage.

Target groups and the impact of the book

The target audiences of the project are mainly LIS educational institutions, heads of LIS schools, LIS educators and administrators, LIS academics involved in curriculum development as well as LIS academics concerned with internationalisation of courses and student mobility. The intention and the expected impact on target groups of the book can be formulated as follows:

- An improved basis for developing strategies and activities for implementing the Bologna Process at individual European LIS academic institutions
- An increasing scale of student and staff mobility in the LIS field
- Strengthened co-operation on curriculum development with special regard to the European dimension and LIS core areas
- Establishment of thematic networks among LIS schools in Europe within teaching and research
- A qualitative enhancement of teaching and research at individual European LIS schools
- Strengthening and consolidating EUCLID as the European forum of collaboration in the field of LIS education and research

Aims and objectives

The overall focus has been on reflections on LIS curricula to stimulate and qualify the European debate between the many different educational environments and to strengthen co-operation between the LIS schools and implementation of the Bologna Process.

Short-term objectives

The short-term and concrete objectives behind the book were:

- To explore issues in and ways of adapting LIS courses to the requirements as set out in the Bologna Declaration
- To examine the idea and relevance of a core curriculum in the context of European LIS education
- To review the current state of curriculum development in LIS schools throughout Europe
- To identify opportunities for enhanced networking and collaboration in the field of LIS education in Europe.

Long-term objectives

The wider and long-term objectives of the conference were:

- To make the European dimension and diversity visible in national LIS education programmes throughout Europe
- To encourage individual LIS schools to reflect on the concept of a core curriculum and juxtapose it with existing institutional LIS curricula
- To encourage cross-country network building among LIS teaching and research academics in Europe
- To create better possibilities for European student and teacher mobility
- To increase the scale of mobility and inter-institutional collaboration together with the volume of individual student and staff exchanges
- To develop a common conceptual framework for defining core elements within the LIS curriculum as a basis for enhancing mobility flows and accelerating the Bologna Process
- To work towards greater flexibility, transparency and comparability of curricula
- To strengthen and enhance the activities of the existing European association in the field: EUCLID

General questions

In each chapter of the book the authors are, more or less, reflecting the following general questions:

- How are the range of typical LIS domains generally reflected in a LIS school curriculum and how should it be reflected?
- Are there special national reasons why some curriculum elements have a particularly prominent place in LIS courses?

- What is the place of the individual LIS curriculum subject in a core curriculum developed from a European perspective?
- What part of the LIS subject could be determined to fall within a core curriculum for LIS?
- In what way could the individual LIS subject be related to the general objectives of LIS courses? In what way could the LIS domain contribute to promoting equivalency, comparability and transparency of LIS courses?
- Which kind of European networks should be built among LIS teachers and researchers in a specific LIS subfield?
- What is the place of a specific LIS domain in joint periods of study abroad?
- Which kind of research areas and research approaches could be defined for each of the ten LIS domains listed below? And how could research be advanced in these areas?

Partnership composition and contribution

The contracting and coordinating institution of the project has been the Royal School of Library and Information Science (RSLIS; in Danish: Danmarks Biblioteksskole).

Partner institutions involved in the planning of the project are:

- University of Barcelona, Faculty of Librarianship and Documentation, Barcelona, Spain
- Hanzehogeschool Groningen, School of Information and Communication, Groningen, the Netherlands
- City University London, Department of Information Science
- Oslo University College, Faculty of Journalism, Library and Information Science, Oslo, Norway
- Potsdam University of Applied Sciences, Department of Information Sciences, Potsdam, Germany
- The University of Vilnius, Faculty of Communication, Institute of LIS, Vilnius, Lithuania

In addition, the project was backed by EUCLID.

Editors, steering group and authors

Editors and Introduction

Leif Kajberg, Consultant, International Relations & Research Administration, the Royal School of Library and Information Science, Denmark.

Leif Lørring, Rector, the Royal School of Library and Information Science, Denmark.

Steering group

Ragnar Audunson, Professor, Faculty of Journalism, Library and Information Science, Oslo University College, Oslo, Norway

David Bawden, senior lecturer in the Department of Information Science at City University London, UK.

Assumpció Estivill, Professor, Facultat de Biblioteconomia i Documentació, Universitat de Barcelona, Spain.

Audrone Glosiene, PhD, Professor, Director of the Institute of Library and Information Science at the Faculty of Communication, Vilnius University, Lithuania.

Leif Kajberg, Consultant, International Relations & Research Administration, the Royal School of Library and Information Science, Denmark.

Leif Lørring, Rector, the Royal School of Library and Information Science, Denmark.

Zinaida Manzuch, MA in Communication and Information, Vilnius University, Latvia.

Gerda van der Molen, Coordinator International Affairs and Internships, Department of Media and Information Management, Hanzehogeschool Groningen, University of Professional Education, the Netherlands.

Authors of Chapter 1. LIS Curriculum in a European Perspective

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Anna Maria Tammaro, Professor, Department of Cultural Heritage. Section Librarianship, University of Parma, Italy.

Assumpció Estivill, Professor, Facultat de Biblioteconomia i Documentació, Universitat de Barcelona, Spain.

Dr. Lorenz Bernd, Fachhochschule für Öffentliche Verwaltung und Rechtspflege in Bayern, Fachbereich Archiv- und Bibliothekswesen, München, Germany.

Anne Marie Bertrand, Professor, Directeur ENSSIB, École nationale supérieure des sciences de l'information et des bibliothèques, Lyon Villeurbanne
France.

Dr. Frederic Blin, Ministère de l'Education nationale, de l'Enseignement supérieur et de la Recherche. Direction de l'enseignement supérieur. Sous-direction des bibliothèques et de la documentation, Paris, France.

A.F.M. (Ton) de Bruyn, Professor, School for Communication, Information Technology and Information Management, Saxion Universities of Applied Sciences, the Netherlands.

Tor Henriksen, Rector Emeritus, Norwegian School of Library and Information Science, Oslo, Norway, Associate professor University of Borås, Sweden and Secretary General of EUCLID.

Dr. Malgorzata Kisilowska, Institute of Information and Book Studies, Warsaw University, Poland.

Fernanda Ribeiro, Professor, Faculdade de Letras da Universidade do Porto, Portugal.

Josiane Roelants Abraham, Professor Dr., ULB-Infodoc, Bruxelles, Belgium.

Authors of Chapter 2. Digitisation of the Cultural Heritage

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Zinaida Manzuch, MA in Communication and Information, Vilnius University, Latvia.

Tatjana Aparac-Jelusic, Professor, PhD, Head of the Department of Information Sciences, Faculty of Philosophy, University J.J.Strossmayer in Osijek, Croatia.

IstoHuvila, MA in Cultural History, Åbo Akademi University, Finland (author has also published as Isto Vatanen).

Authors of Chapter 3. Information Literacy and Learning

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Sirje Virkus, Lecturer, Chair of Information Studies, Department of Information Studies, Tallinn University, Estonia.

Albert K. Boekhorst, Professor, Dr., University of Amsterdam, the Netherlands; University of Pretoria, South Africa.

José A. Gomez-Hernandez, Professor, Library and Information Science Department, Faculty of Information and Communication Studies, University of Murcia, Murcia, Spain.

Annette Skov, Associate Professor, Royal School of Library and Information Science, Copenhagen, Denmark.

Sheila Webber, Lecturer, Department of Information Studies, Sheffield University, United Kingdom.

Authors of Chapter 4. Information Seeking and Information Retrieval

Coordinator and work group leader at the seminar in Copenhagen August 2005:

David Bawden, senior lecturer in the Department of Information Science at City University London, UK.

Jessica Bates teaches in the School of Information and Library Studies at University College Dublin (Ireland), and is completing a PhD in everyday life information behaviour.

Maria Ines Cordeiro is Library Information Systems Manager at the Calouste Gulbenkian Foundation, Lisbon (Portugal), and is completing a PhD in conceptual interchanges between LIS and IT at University College London, UK.

Jela Steinerova is associate professor in LIS at Comenius University Bratislava, Slovakia.

Polona Vilar teaches at the Department of Library and Information Science and Book Studies at the University of Ljubljana (Slovenia), and is completing a PhD in evaluation and design of retrieval interfaces.

Pertti Vakkari is professor in the Department of Information Studies at the University of Tampere, Finland.

Authors of Chapter 5. The Information Society: Barriers to the Free Access to Information

Coordinator and work group leader at the seminar in Copenhagen August 2005: Aleksandra Vranes, PhD, University of Belgrade, Serbia & Montenegro.

Herbert Achleitner, PhD, Professor, Emporia State University, Kansas, USA.

Alexander Dimchev, PhD, Dean, Associate Professor, Faculty of Philosophy, "St. Kliment Ohridski" University of Sofia, Bulgaria.

Jadranka Lasich-Lazich, PhD, Professor, Faculty of Philosophy, Department of Information Sciences, University of Zagreb, Croatia.

Ljiljana Markovich, PhD, University "Brothers Karich", Serbia & Montenegro.

Authors of Chapter 6. Knowledge Management/Information Management

Coordinator and work group leader at the seminar in Copenhagen August 2005: Gunilla Widén-Wulff, PhD, Senior Lecturer at the Department of Information Studies, Åbo Akademi University, Finland.

David K Allen, PhD, Senior Lecturer in Information Management, Leeds University Business School, Leeds University, Leeds, UK.

Elena Maceviciute, PhD and Senior Lecturer, Swedish School of Library and Information Science, University College Borås, Borås, Sweden.

Camilla Moring, Assistant Professor, Department of Library and Information Management, Royal School of Library and Information Science, Copenhagen, Denmark.

Richard Papík, PhD, Assistant Professor & Director of the Institute of Information Studies and Librarianship, Charles University, Prague, Czech Republic.

Tom Wilson, Professor Emeritus, University of Sheffield, Sheffield, UK.

Authors of Chapter 7. Knowledge Organisation

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Birger Hjørland, PhD, Professor, Royal School of Library and Information Science, Copenhagen, Denmark.

Vanda Broughton, Lecturer in Library & Information Studies, School of Library, Archive & Information Studies, University College London, UK.

Joacim Hansson, PhD, Senior Lecturer, Swedish School of Library and Information Science, University College Borås, Borås, Sweden.

Maria J. López-Huertas, Associate Professor, Facultad de Biblioteconomía y Documentación. Granada, Spain.

Authors of Chapter 8. The Library in the Multi-cultural Information Society

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Ragnar Audunson, Professor, Faculty of Journalism, Library and Information Science, Oslo University College, Oslo, Norway

Marta Brunelli, Università degli Studi di Macerata, Italia.

Anne Goulding, PhD, Reader in Information Services Management, Department of Information Science, Loughborough University, UK

Authors of Chapter 9. Information and Libraries in a Historical Perspective

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Ilkka Mäkinen, PhD, Lecturer, Docent, Department of Information Studies, University of Tampere, Finland.

Alistair Black, PhD, Professor of Library and Information History, Leeds Metropolitan University, UK.

Miha Kovac, Associate Professor of the Book Studies, Department of the Information and Library Science and Book Studies at the School of Arts, University of Ljubljana, Slovenia.

Laura Skouvig, PhD, Assistant Professor, Department of Library and Information Management, Royal School of Library and Information Science, Copenhagen, Denmark.

Magnus Torstensson, Senior Lecturer/Associate Professor, Swedish School of Library and Information Science, University College Borås, Borås, Sweden.

Authors of Chapter 10. Mediation of Culture in a European Context

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Anders Frenander, Associate Professor, Swedish School of Library and Information Science, University College of Borås, Borås, Sweden.

Audrone Glosiene, PhD, Professor, Director of the Institute of Library and Information Science at the Faculty of Communication, Vilnius University, Lithuania.

Henrik Jochumsen, Associate Professor, Royal School of Library and Information Science, Copenhagen, Denmark.

Jofrid Karner Smidt, Associate Professor, Faculty of Journalism, Library and Information Science, Oslo University College, Oslo, Norway

Authors of Chapter 11. Practice and Theory: Placement as Part of the Curriculum

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Gerda van der Molen, Coordinator International Affairs and Internships, Department of Media and Information Management, Hanzehogeschool Groningen, University of Professional Education, the Netherlands.

Constança Espelt, Fieldwork Coordinator, Facultat de Biblioteconomia i Documentació, Universitat de Barcelona, Spain.

Primož Južnič, Professor, Dr., Faculty of Arts, Department of Library and Information Science and Book Studies, University of Ljubljana, Slovenia.

Authors of Chapter 12. Library Management

Coordinator and work group leader at the seminar in Copenhagen August 2005:
Ramune Petuchovaite, Dr., Lecturer, Integrated Information Centre, Faculty of Communication, Vilnius University, Lithuania.

Ursula Georgy, Dr., Professor, University of Applied Sciences Cologne, Department of Information Science, Germany.

Aira Lepik, Dr., Professor, Chair of Information Studies, Department of Information Studies, Tallinn University, Estonia.

Author of Chapter 13. A Survey of LIS Schools in Europe

Jeannie Borup Larsen, second year Master's degree student, the Royal School of Library and Information Science, Copenhagen, Denmark.

1 Library and Information Science Curriculum in a European perspective

Assumpció Estivill
Lorenz Bernd
Anne Marie Bertrand
Frederic Blin
Ton de Bruyn
Tor Henriksen
Malgorzata Kisilowska
Fernanda Ribeiro
Josiane Roelants Abraham
Anna Maria Tammaro

Introduction

This paper on Library and Information Science (LIS) curriculum in a European perspective is based on the results of the online and in person discussion held by Workshop Group-1 and on the literature review of international and national papers on Bologna process's impact on LIS education in Europe. It is structured into three main parts:

Section 1 attempts to identify the level of transparency of LIS programmes wanted after Bologna.
This was done by analysing the structure of LIS programmes: duration of the programme, level definition using Dublin descriptors, general subjects or specialisations, ECTS credit system, modularization and practical work.

Section 2 deals with the curricular content of the LIS programme.
For better understanding, the aim of this part is to map the principal knowledge areas of LIS school, trying to encompass both the "information" and "document" traditions.

The final Section deals with the findings of a recent IFLA survey on quality assurance systems in LIS and the evaluation of LIS programme in Europe. Quality assurance is one of the primary aspects of the Bologna declaration.

Background and context

Bologna process

Bologna process is presently the major reform of Higher Education (HE) in Europe. It takes its name from the Bologna Declaration1, which was signed in Bologna on 19 June 1999 by the Ministers of Education of 29 countries in Europe. The applicant countries were: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Swiss, and United Kingdom. At the Prague meeting, then joined the Bologna process: Croatia, Cyprus, and Turkey. Four Western Balkan countries – Albania, Bosnia-Herzegovina, "the former Yugoslav Republic of Macedonia" and the Federal Republic of Serbia and Montenegro – joined the Bologna process at the Berlin Conference, along with the Principality of Andorra, the Holy See and Russia. 40 countries are now involved in the Bologna process.

The goal of Bologna is to facilitate student mobility and improve employability in Europe; the focus is on the recognition of qualifications. The main objective of the Bologna Declaration was that of transparency. This has been realised by harmonising the architecture of higher education systems into two (then three) main cycles, with a common structure for university studies, a diploma supplement, and a common system of credits, the European Credit Transfer System (ECTS).

In countries introducing such a new system, this question arose: Where do the first cycle end and the second cycle begins. That gave rise to the shared "Dublin descriptors" (Joint Quality Initiative, 2002) for a Bachelor and a Master level and later extended to the Doctorate (2004). The descriptors work for marking the learning outcomes of the first cycle and distinguishing them from the outcomes of the second and the third cycle (Adam 2004). The word 'competence' is used by the Dublin descriptors in its broadest sense, allowing for gradation of abilities or skills. They include: Domain specific competences (knowledge and knowledge applying, judgements); special competences (knowledge and knowledge applying) and transversal competences (communication, learning skills).

Later, the Copenhagen Declaration (European Commission, 2002) focused on lifelong learning and increased European co-operation among Vocational Education and Training (VET) and Higher Education (HE) for the accumulation of ECTS (not only transfer), where it is stated that increased support should be given:

'…to the development of competences and qualifications at sectoral level, by reinforcing co-operation and co-ordination especially involving the social partners.'

This statement reflects the increasingly important role played by sectors in developing education and improving the recognition of qualifications for better employability. Employability is the most elusive of the Bologna Declaration objectives. Some of the

1 The formal name of the Bologna declaration is the "European Higher Education Area - EHEA".

factors impacting on employability are: quality assurance, content design and relevance of programmes, theory and practice ratio, clear information on learning outcomes and the qualifications framework.

At the Berlin ministers meeting (Berlin Communique, 2003), EHEA reform was made more precise. Quality assurance was selected as one of the three goals for action. The developments at sector level should point towards the gradual emergence of what is called zones of mutual trust. While mostly established on a voluntary basis without rigid institutional and legal frameworks, these zones of mutual trust will enable international co-operation and mobility. Quality assurance, in the framework of Bologna process, is focused on learning outcomes and student competences and is seen as a stimulus for innovation of curriculum content, for a balanced theory-practice-ratio (e.g. teaching and learning methods, cooperation with enterprises), and as a definition of benchmarking.

LIS education in Europe

The most frequent structure for LIS education in Europe is its location in a university department or Faculty. Sometimes, especially in countries of Central and Southern Europe, these LIS departments coexist with other forms of on-the-job training offered by national libraries or other libraries or cultural institutions (Harbo, 1996). Only rarely do independent library schools exist – except for example for Denmark. However we will use LIS schools in this paper with the meaning of a LIS programme offered by a Higher Education institution. This phenomenon characterising LIS education in Europe, which we can call "convergence", has a big impact in the organisation of the LIS programme, i.e., for content design, where general disciplines sometimes exist as mandatory subjects, or for staff size and recruitment selection criteria. Some Library schools, which have to look for financing from other sources than Government, as for example in the UK and the Netherlands, are more labour market oriented, with a curricular catalog trying to attract students with innovative courses, but most of the other are more academic. After the Bologna reform, government control of LIS schools in Europe became greater, stimulating the convergence with other disciplines or areas.

The convergence phenomenon of LIS schools in Europe is also related to the interdisciplinarityof the curricula, which include information management and information technology, archival studies, media and communication studies, book studies, records management and others. By adding components of these fields to the LIS curriculum, it becomes less LIS and graduates will begin applying for jobs that are only distantly related to the traditional labour market.The debate arose, for example, if archives and libraries should be integrated in the same course or not. LIS and Archival Science have been developing separately as professional areas. However we must reflect on some basic and important questions: do libraries and archives deal with /study different objects or they all deal with information? Information and communication technologies (ICT) have dramatically transformed access, presentation and the life cycle of documents and information. Together with management and marketing, these subjects have been added to curricula.

The concept of internationalisation has been persisting in European LIS circles for some decades and is described by Vodosek (Vodosek, 2002) as "better knowledge of each other; comparability of structures and contents; reciprocal recognition of professional qualifications and degrees; international exchange and co-operation; and internationalisation of content".

The purpose here is to look at the concept of internationalisation, including a definition of the different approaches, for an exploration of Bologna process impact on the LIS sector. Internationalisation has been addressed from three different points of view (Tammaro, 2005):

1) The first approach sees the inclusion of the international dimension at university or LIS school level, as part of the university/institution mission and is one of the elements often used for accreditation. Enrolment of international students is the specific aim, compensating budget shortcuts and losses of national students. This includes the need for students of studying in a foreign language, usually English.

2) The second looks at specific programmes or courses for the internationalisation of LIS schools. There are three types of achievements:
Students/teachers mobility and exchange, through European programme as SOCRATES, TEMPUS and ERASMUS;
Twining agreement: the same academic content is delivered in different LIS schools with mutual academic recognition of the title – where education is sometimes provided by foreign teachers;
Joint course, where all the course management from the design to the assessment takes place in the network of LIS schools.

3) The third approach concerns the internationalisation of procedures, which are in general nationally based, as recognition of academic qualifications and quality assurance procedures. This approach is that of the Bologna process.

Library and Information Science programmes

The LIS discipline could be considered as the study of the communication channels between authors of documents and their users. We speak of Library and Information Science (LIS) instead of Librarianship or Library Science, accepting the worldwide trend of including the word "information" in the discipline name. However, one of the biggest differences in LIS Schools in Europe is determined by the presence and the understanding of the word information in the title and in the content of the programme.

Target of LIS programmes

The target of the LIS programmes includes all information professionals. It is not limited to librarians, but includes archivists, documentalists, record managers, web editors and, with some hesitations, publishers and museologists. Focusing on the mediator role, LIS can be defined as the "science" of organise mediation, using the term science as a special

kind of science in the sense defined by Ranganathan. This makes LIS studies a field preparing for practical work, teaching and research in librarianship and the book trade, archives administration, records management, museums or any other physical or virtual collection or archive based activity, and beyond the standard documentary institutions or organisations.

Professional role

All information professionals have to organise collections, both physical and/or virtual. Their role is that of mediator between authors and users, as suggested by Tor Henriksen; other roles as educators or facilitator have been debated, without reaching an agreement.

Structure of LIS programmes

A three-level structure has achieved total European application through the Bologna process. Entry requirements, theory/practice ratio and qualifications framework are other elements that indicate a LIS programme's ability to provide for greater student and teaching staff mobility, better employment opportunities, and recognition of competences for lifelong learning.

Three level structure

Using the three levels of the Bologna Process and the Dublin Descriptors, the structure of LIS courses can be represented as a triangle (Fig. 1) where from bottom to top we go from broad and general subjects to increasing specialisation.

These three levels, in increasing order of specialization, are:

a) The Bachelor level, consisting of at least three years of study (minimum 180 - maximum 240 ECTS)
The current organisation of Bachelor studies in European countries represents a variety of solutions. In some countries we find Bachelor programmes composed of more or less basic studies of background or methodological character, with no traces of LIS. In other countries, the Bachelor programmes have LIS subjects only. There is obviously no reason to ask for standardisation here. Probably, the best solution will be found in a combination of basic, methodological and LIS subjects.

The Bachelor level should aim at producing competent candidates for practical work in all kinds of documentary institutions or organisations, but a certain amount of preparation for higher level studies is recommended.

Dublin Descriptors defines the competences of the Bachelor level as:

Knowledge and understanding: [is] supported by advanced text books [with] some aspects informed by knowledge at the forefront of their field of study;

Applying knowledge and understanding: [through] devising and sustaining arguments;

Making judgement: [involves] gathering and interpreting relevant data;

Communication:[of] information, ideas, problems and solutions;

Learning skills: have developed those skills needed to study further with a high level of autonomy.

b) The Master level consisting of two years of study (minimum 60 - maximum 120 ECTS)
At this level, only LIS and related methodology should be dealt with. If necessary, the Master level should start with a basic course on the foundations of LIS. At the completion of the course, the successful candidates should have competences for higher positions in documentary and general institutions and have been introduced to research work through the preparation of a master thesis.

Dublin Descriptors defines the competences of Master as:

Knowledge and understanding: provides a basis or opportunity for originality in developing or applying ideas often in a research context;

Applying knowledge and understanding: [through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts;

Making judgement: [demonstrates] the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete data;

Communication: [of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue);

Learning skills: study in a manner that may be largely self-directed or autonomous.

c) The Doctoral level consisting of at least 3 years of work (180 ECTS)

Here the main content will be research methods, epistemology and preparation and presentation of a Doctoral thesis. This level aims at producing researchers and teachers. In some European countries, this level is also required for Head Librarians.

Dublin Descriptors defines the competences of Doctorate as:

Knowledge and understanding: [includes] a systematic understanding of their field of study and mastery of the methods of research associated with that field;

Applying knowledge and understanding: [is demonstrated by the] ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity .. [is in the context of] a contribution that extends the frontier of knowledge by developing

a substantial body of work some of which merits national or international refereed publication;

Making judgement: [requires being] capable of critical analysis, evaluation and synthesis of new and complex ideas;

Communication: With their peers, the larger scholarly community and with society in general (dialogue) about their areas of expertise (broad scope);

Learning skills: Expected to be able to promote Doctoral level within academic and professional contexts, technological, social or cultural advancement.

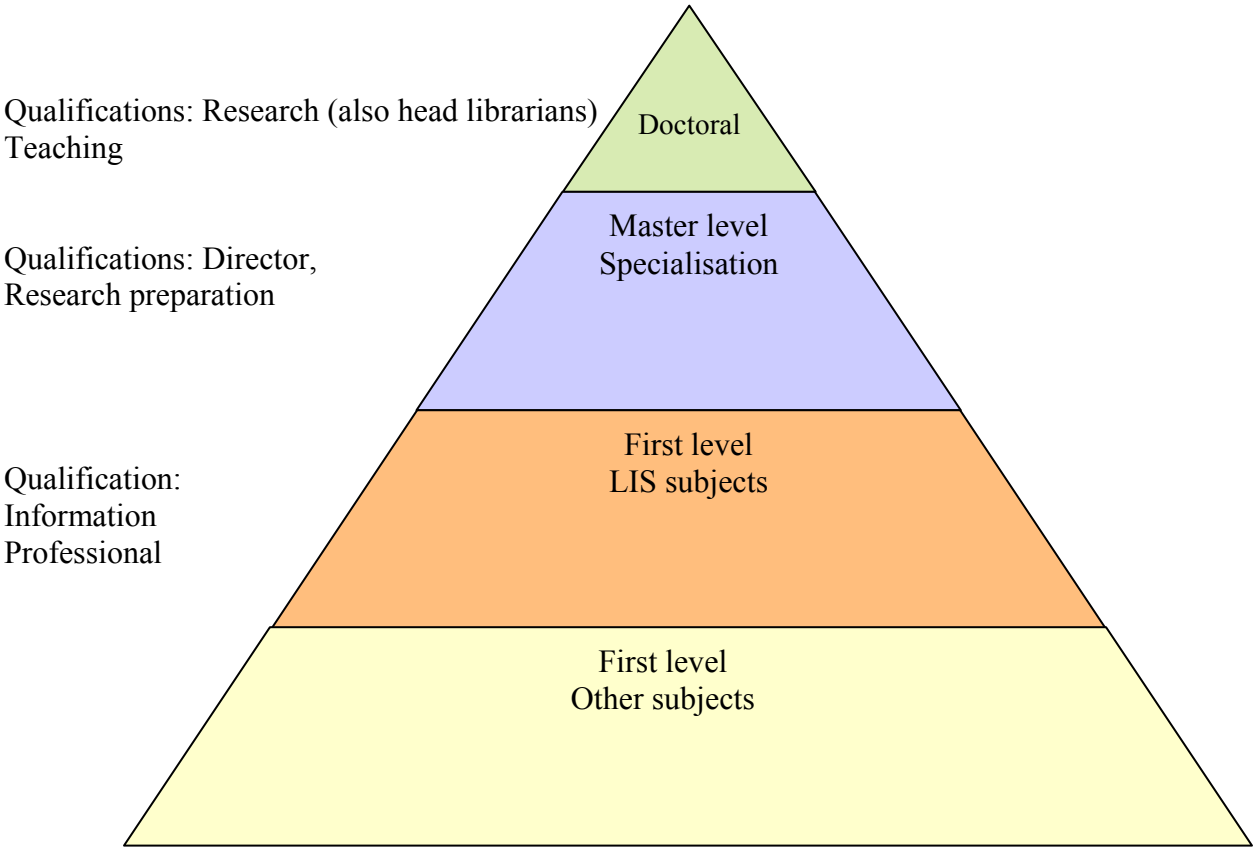

Fig. 1 Structure of LIS programmes

Entry requirements

It is recommended that the information profesionals career starts with a Bachelor level, preferably in LIS, but flexibility might be needed for accepting also students with other background candidates for a Master course.

Theory/Practice ratio

Regarding the orientation of the LIS programmes – professional / academic / research – the Bologna Declaration mentions that

"The first degree awarded after the first cycle shall also be relevant to the European labour market as an appropriate level of qualification".

The labour market orientation pushes for including in the educational system and also in the didactic methodology experiential components, such as internship, and facilitating placement. In curriculum development the focus is on competences –generic, academic and professional– which are going to have a relevant role. Competences are important at the undergraduate level and also for the Master's degrees, when they are professionally oriented. The issue of theory vs. practice and of academics prospective vs. vocational education was one of the first to arise in the Group's discussion. Using the words of Ton de Bruyn: we have to consider the integration between the architect and the builder, to stress that we have to build a palace and if we want that this palace will be strong and effective, we need both. The reflective practitioner approach seems to be the best example of a perfect balance, but this issue is really controversial. Ton de Bruyn was also very useful in the discussion for distinguishing the curriculum design from its delivery and describing the competences based approach realised by Dutch LIS schools.

Regarding competences, we considered the following documents, as they reflect the point of view of professionals:

Competencies for information professionals of the 21st Century. Rev. edition, June 2003. Special Libraries Association, 2003.
<http://www.sla.org/content/learn/comp2003/index.cfm>

Guidelines for a graduate program in archival studies of the Society of American Archivists
<http://www.archivists.org/prof-education/ed_guidelines.asp>

Euroguide LIS: competencies and aptitudes for European information professionals. 2nd entirely revised edition. Produced with the support of the European Commission, as part of the Leonardo da Vinci program. ADBS Éditions, 2004. 2 vols.
<http://www.certidoc.net/en/euref1-english.pdf>,
<http://www.certidoc.net/en/euref2-english.pdf>

Euroguide LIS can be an starting point. A part from being a very complete list of competencies, it also gives indications of the four levels considered in competencies:

Level 1: Awareness. The individual is happy to limit him/herself to using the tools. A basic appreciation of the nature of the field is necessary (essentially knowledge of the basic vocabulary and the ability to carry out certain practical or clearly defined tasks).

Level 2: Knowledge of practice or techniques. The individual is capable of reading and

writing about the phenomena studied. He or she can communicate with specialists in the relevant subject. This is the first professional level (use of practical know-how). He or she can manipulate the basic tools, carry out specialised or repetitive tasks and convey practical instructions.

Level 3: Effective use of the tools. The individual is aware of the existence and content of techniques and can define, discuss and use them effectively. He or she is capable of interpreting a situation and making judgements that involve adapting the job or creating a tool. He or she can select individual actions and combine them into complex activities.

Level 4: Effective use of methodology. The individual uses a given technique but can apply it to other circumstances, use it in different ways, find new areas for its application, as well as devise improvements or more sophisticated and/or better adapted ways of deploying it. He or she is capable of devising new tools or products and adopting a strategic or global approach to his/her activity, noting the complexity of situations and being able to find appropriate original solutions.

However, these are just recommendations and we should recognise that European countries have very different traditions of LIS education. Some countries have a well established tradition in LIS university programmes, while others have just recently established LIS programmes at the university level. Labour markets are also very different in each region, and the LIS programmes have to be aware of the local/regional labour market.

Qualifications framework

LIS practitioners seeking for a first appointment or for promotion within an information organisation should be able to provide employers with assurance of the currency of their knowledge, skills and competences.

The European Council of Information Associations (ECIA) has worked for international recognition of qualifications for LIS professionals. In 1994, ECIA established a certification for allowing experienced professionals to obtain recognition of their level of qualification, even if they did not possess the corresponding diploma. Another outcome was the definition of compatibility criteria between different certification systems. The second stage was CERTIdoc: its objective has been the definition and establishment of a European certification system (Meyriat, 2003).

The European Qualification Framework, Europass and ECVET have been recently discussed, in the framework of the Bologna process, as reference tools for recognition.

The European Qualification Framework (EQF) will make it possible to compare and link the growing diversity of education, training and learning provisions existing throughout Europe. EFQ is at an early stage of development, but some of its elements have been identified, as the learning outcomes focus, the credit accumulation system (ECVET) and the portfolio (EUROPASS). Europass should consist of a portfolio document, with a common brand name and a common logo supported by adequate information systems,

voluntary adopted by individuals. ECVET introduces credit systems for the accumulation (more than transfer as originally conceived) of credits: it requires a compatible organisation of curricula and programmes delivery and mutual trust in the quality of learning providers. All these tools have a direct relationship to levels and level indicators as defined in the Dublin Descriptors.

General content of LIS programmes

LIS field

Dealing with general content, the discussion was guided by Tor Henriksen. Covering positions in all kinds of documentary institutions and organizations, as well as teaching and research, LIS education institutions have traditionally covered three basic subfields of study:
The first one is the study of documents.
The second is knowledge organisation, e.g. a kind of micro-operation on documents.
The third is what is normally called administration or management of documentary institutions: general topics, like cultural and information policy and legislation, planning etc.
These basic subfields are normally dealt with in a synchronic manner, but are open to diachronic aspects (history or futurology). User studies are also related to all three subfields.

The basic principles underlying this subdivision are:

Distinction between entities (documents) and operations (micro and macro)
Distinction between synchronic and diachronic approaches
The user orientation

a) The study of documents
This subfield covers the two main genres: Fiction and non-fiction, their typology and the structure of the main kinds of documents. For some kinds of user, a specific user orientation is recommended e.g. children, visually handicapped, researchers, music listeners or performers.
The document being a combination of text and medium, the various media should be dealt with from the oldest forms to the electronic ones.
It is assumed that it is not possible to standardise the content at a European level. Each institution must make its priorities according to the traditions of the country and the labour market for the candidates

b) Knowledge organization and information retrieval
This subfield has already reached a certain amount of standardisation and consists of the following items:
Formal and subject analysis
Formal (bibliographic) and content representation (with or without indexing languages)
Storage (cataloguing, shelving, databases)

Searching and retrieval (including search behaviour)
Evaluation of performances.

Diachronic aspects to be dealt with could be, for example, classification history.

c) Organisation and management. Cultural and information policy and legislation
This item covers primarily documentary institutions or organisations, but also issues related to the document flow in institutions or organisation in general (information management). Central topics will be the building up of collections or archives through acquisition policies or deposition schemes, the study of the users to be served and the organization of the various services.
An obvious diachronic approach will be the history of institutions, for example, library history or scenarios for the future.
General topics like planning, staff administration, budgeting and maintenance of buildings should be dealt with here.

The Group has discussed about the focus on document and organisations, not clearly adapting with a user centred approach. It has also considered the revolutionary impact of Internet and the Web for communication and networking.

Another view has been considered, presented by Wilson (Wilson, 2001) in his paper "Mapping the curriculum in information studies" which adds a fourth block to the three defined before (People) and looks at information. The Wilson model has been used for comparing the LIS programmes of new countries entered in Europe (Juznic, and Badovinac, 2005).

The Wilson model for information studies is the result of the interaction among four fields:
Information content (the "traditional" function of library and information services);
information systems (information in organizational settings);
people (users and information providers);
and organizations (information producers, libraries, information centres, etc.).

Methodology

The methodology is essential for the LIS discipline. In LIS schools in Europe we can find different methodological approaches:
Epistemology;
Computer science;
Linguistic/Philology;
Social Research;
Research Methods;
Bibliometrics.

This is a very important topic which has been raised in the forum, but the approaches are very different at the moment.

Quality assurance

It should be said that the link between internationalisation and quality assurance was missing in Europe before Bologna (Campbell, and Van der Wende, 2000). Quality is a very transversal topic, pervading all the issues and problems of curriculum development at European level, and especially important for the mutual trust zone which the Bologna process wants to build in Europe. It is not a bureaucratic activity for accountability, but should be understood as a tool for transparency and as a stimulus for enhancing quality in LIS schools. The goal of the Bologna process is to relate quality assurance to qualification recognition. There are a number of reference tools. They stress the students' involvement in evaluation and learning outcomes focus.

Quality assurance in European LIS Schools

At the Berlin Conference in 2003, the Education and Training Section of IFLA started a survey about quality assurance models in LIS programmes, aimed at achieving greater transparency of professional qualifications and increasing international cooperation of LIS schools for quality assurance and accreditation. The primary purpose of this survey was to gather data from a sufficient number of LIS schools from each region of the world about current quality assurance processes, priorities and concerns. A questionnaire was sent to LIS schools worldwide and the findings have been presented at IFLA Oslo Conference. The IFLA questionnaires sent in Europe were 33, of which 28 were returned (85%).

Most of the European LIS schools have a national quality assurance system. The quality assurance process is at present driven by Government or Government funded agencies (71%), combined in 36% of countries with internal Quality Audit. The European model of accreditation is different from North America and most of English speaking countries where the most diffused model of quality assurance is based on accreditation by professional associations. The professional association model as leading the quality assurance process is present in European Library Schools as 7% of countries. Only 11% of the countries in Europe have no external evaluation or accreditation of quality; in this case there is a formal validation of the LIS programme the first time it is submitted for approval. Some of the library schools have also external assessors (21%) as employers and alumni and an international expert panel.

The quality assurance process most usual in European LIS schools is organized in four steps: Periodical evaluation process; self-assessment report; expert site visit and follow-up report. The process takes place every two to five years (68%), with self-assessment (57%) and site visit (54%%) often combined together. Differences could be evidenced for the follow up report, not often produced (43%) and in most of cases public (only 7% of countries have limited availability of the report).

Most of the respondents said that quality guidelines are followed. Typically the guidelines are part of an accreditation handbook or policy manual realised by the accreditation agency that contains a description of the accrediting process, the eligibility requirements, relevant policies that institutions must address in their self study reports

and other documentation developed to assist institutions that are preparing self study and conducting evaluation and assessment exercises. The policy generally elucidates standards and relates to their application.

Quality criteria and indicators could act as a thinking device to promote ongoing dialogue about LIS schools quality in Europe. It is interesting to note that content design and input resources indicators are considered the most important indicators of quality: they ranked higher (respectively 86% and 68% of countries) which is consistent with the fact that input measures are worldwide more diffused than others. Quantitative and demographic data on students are also considered important quality indicators by 50% of European countries.

The Bologna process focuses on learning outcomes; however, the survey has demonstrated that this indicator is used only by 54% of European countries. Another important indicator is the involvement of students in the evaluation process, which occurs in 71% of European LIS schools. It should be said that in North America students are involved in evaluation of the programme only in 3% of LIS Schools. This can be explained inside the framework of historical, educational policy and the social dimensions of European LIS programmes.

The necessary mutual trust between library schools in Europe can stem from quality assurance systems, which are appropriately compatible and credible, so that they can be validated. Regarding quality assurance it can be affirmed that homogeneity exists, despite some differences. However the learning outcomes focus, stressed by the Bologna process, is less popular than input measures.

Conclusion

One of the important results of the Workshop has been the recognition of the need of continuing the discussion about the principles of LIS education and the change involving all LIS schools. EUCLID, the European Association for Library and Information Education and Research´, can have a role in this scenario, assuming an orientation role and producing guidelines addressed to its members.

There is more clarity after Bologna in curriculum structure and content of LIS schools, but there is still work to be done for achieving a better comprehension and agreement about the identity of the LIS discipline. This is essential for any cooperation and coordination of LIS schools in Europe to be successful.

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(Websites visited: September 2005)

2 Digitization of Cultural Heritage

Zinaida Manžuch
Isto Huvila
Tatjana Aparac-Jelusic

Abstract and summary

Digitization of cultural heritage refers to the dynamic and evolving interdisciplinary domain that encompasses philosophical, social, cultural, economic and managerial aspects and consequences of management of cultural heritage in the technological environment. Considering scarcity of research compared with the growing importance of digitization education, the aim of this chapter is to foster discussion about integration of digitization disciplines into LIS curricula in higher education schools across Europe in the context of Bologna process. For this purpose, the current education trends in digitization are reviewed, the conceptual framework for digitization is developed and the model for digitization studies, covering structure, scope, learning outcomes and teaching methods is proposed. It is concluded that the educational models in digitization are affected by the main trends in relevant research which are in the stage of transition from a purely technological approach to the appreciation of social and human aspects in studies of cultural heritage. The suggested educational model is based on a multilayered concept of communication of memory that reflects the complex nature of cultural heritage phenomenon and foresees the synergies between LIS, archival science, museology and computer science.

Disciplines concerned with digitization of cultural heritage emerged in the context of LIS curriculum under the pressure of practice and as a result of vast experience accumulated in multiple projects on creating and maintaining digitized collections. Management of cultural heritage in the technological environment is without any doubts an important area for LIS professionals requiring new skills and knowledge. In academic environment philosophy and content of curriculum usually relies both on the conceptual framework of definite research fields and needs of practice. However, digitization of cultural heritage as a research field is at the early stages of development and is not well-defined at the conceptual level.

The aim of this chapter is to foster discussions about integration of studies of digitization of cultural heritage into the LIS curricula in higher education schools across Europe in the context of Bologna process. In order to reach the main goal several objectives are accomplished:

- Current education trends in digitization of cultural heritage are identified.
- The conceptual framework, underlying digitization studies, is developed.

- The model for digitization studies, considering undergraduate and graduate levels and involving structure, scope, learning outcomes and teaching methods is proposed.

The chapter is based on the materials from virtual discussions and meetings of the thematic group on *Cultural heritage and digitization of cultural heritage*.

Digitization of cultural heritage in context

Digitization, which in narrow terms may be defined as conversion of information from analogue to digital form, has had a far-reaching impact on practical activities of libraries and other information institutions and services. Having started with series of experiments with information and communication technologies, the digitization concerns overgrown technical issues of conversion and expanded to cover the management of collections, mediation and representation of cultural heritage in the digital environment, economics of digital repositories, business models, quality and sustainability of digitization initiatives etc. Digitization and migration of library services to the digital environment encouraged emergence of new LIS disciplines (e.g. digital librarianship) and transformation of traditional ones (e.g. bibliographic description to metadata standards).

Digitization became a pre-requisite for closer co-operation between museums, archives and libraries, which are increasingly being treated collectively as memory institutions thus highlighting their common functions and roles. Convergence of memory institutions emerged from the pressure of practice and affected the construction of curricula of higher education institutions by encouraging an integral approach to education in archival science, museology and LIS. In the academic community these changes fostered interdisciplinary research of the phenomenon of memory institutions. Organizational structures, technological processes, services, in other words, all features that influence an institutional identity of libraries, archives and museums, depend on the nature of holdings these institutions operate. B. W. Rayward points out that growing flows and complexity of knowledge was a pre-requisite of differentiation of institutional identities of libraries, museums and archives based on the need for effective management of information resources[1]. Any information can be represented and stored as a string of bits, therefore, the significant differences existing between objects, printed material, and even buildings or landscapes in the material world blurs in the digital environment. Quest for the definition of a digital document brings LIS researchers back to the beginning of the XX century and ideas of documentalists who offered generic definition of document as a "repository of an expressed thought". From the user point of view, collaboration between memory institutions brings multiple benefits because it destroys artificial barriers posed by different formats and provides a holistic view of human knowledge preserved in libraries, museums and archives. Therefore, on practical level memory institutions explore possible ways of collaboration and on the theoretical level convergence or, at

[1] Rayward, Boyd W (1995), "Libraries, Museums, and Archives in the Digital Future: the Blurring of Institutional Distinctions", Multimedia Preservation: Capturing the Rainbow, 1995. National Preservation Office Conference, Brisbane, Australia, available at http://www.nla.gov.au/niac/meetings/npo95wr.html

least, closer interaction and interchange of knowledge between museology, library and information science and archival science is considered as a future of the disciplines. In higher education these trends result in experimental curricula, which integrate studies in LIS, museology, and archival science.

Nowadays the higher education institutions increasingly integrate digitization studies into LIS, museum and archival studies curricula. However, due to high variations in interpretation of the content of digitization studies there are multiple approaches on its place and scope within general LIS context. Most often digitization becomes a part of diverse "umbrella" disciplines that employ various titles, such as digital librarianship, digital libraries, cultural heritage informatics and even broader ones as cultural or social informatics.

Absence of clear understanding of the scope of these disciplines, increasing demand for a sound grounding of their need and contents for the LIS profession, was a stimulus for research and critical assessment of the current educational offerings in these areas. Currently the majority of publications on the "digital" disciplines in LIS are found in the domain of education of digital libraries. The concept of "digital library" is broadly and rather loosely used in various academic and professional communities, including LIS and computer sciences. However, at the conceptual level the content of the term "digital library" is not clearly defined and, therefore, in many cases even controversial. Research in digital library education in the context of LIS was fuelled by the ambiguity of the term and its interdisciplinary background. Typical questions researchers are interested in are 1) what is a digital library? 2) what is the scope of this discipline? and 3) how to bridge LIS and computer science (or even broader range of disciplines) approaches?

In their 1999 analysis of LIS educational offerings worldwide (however, with the main emphasis on the USA) consisting of an analysis of the websites of LIS schools and a questionnaire survey, Spink and Cool concluded that most courses had no sound conceptual background, which would argument the architecture and content of the course on digital libraries: *for many institutions, the digital library is merely a digitized collection of information items accessible via the web*[2]. This was one of the reasons of narrow focus on technical aspects of building digital library systems.

The tradition to monitor digital library courses offered by LIS schools was continued by Tefko Saracevic and Marija Dalbello, who performed a survey of digital library education in 2001. The methodology was similar and included questionnaire and LIS website survey. As a result researchers derived several broad models of digital library courses: 1) technology as a tool with an instrumental approach to ICT in building of digital libraries and the focus on technological infrastructure and processes; 2) digital libraries as environments that is concerned with social and cultural environments digital libraries reside in; 3) digital library as made of objects with the main focus on the management of the life-cycle of documents and artefacts in the digital environment, and 4) combined model that includes different perspectives on the subject. Conclusion of the survey is of

[2] Spink, Amanda and Cool, Collen (1999), "Education for Digital Libraries", *D-Lib Magazine*, Vol. 5, No. 5, available at http://www.dlib.org/dlib/may99/05spink.html

little difference from the previous survey – the instrumental approach that is focused on technology-based procedures and tools is prevailing, though there are some signs of presence of broader vision of digital libraries in social and cultural contexts[3]. Building on the results of previous research, a new attempt to make an inquire into ambiguous field of digital libraries was undertaken by Anita Coleman, who took an interdisciplinary approach as a basis for the research which was grounded on the analysis of research on digital library education and advice of professional library and computing associations. The author indicates the danger of fragmentation of knowledge in education for digital libraries and emphasizes the need for interdisciplinary approach to integrate digital library related domains in computer sciences and LIS[4].

Research on digital library education provides a vast material for further reflection. An important conclusion that is prompted by most surveys is that digital library education suffers from the lack of a holistic approach to digital library as phenomenon that integrates social, cultural, economical, political and technological perspectives. Remarkably, in offering model for digital library education authors tend to introduce an extensive concept suggested by Christine Borgman[5]. It seems that a multilayered vision of the digital library, covering such components as technological infrastructure, collections, communities of users, services, institutions, fits the best in solving the problem of integration of digital library knowledge into general LIS agenda. Thus, it is necessary to envision digital library not only in terms of technological infrastructure but also as a set of services (e.g. educational, services for communities of interest, support for scholarly activities etc.) that build on certain managerial decisions and economic models and are intended for specific user communities (e.g. occupation-, age-, culture- related communities etc.) and offered in the specific institutional settings (e.g. museums, archives, libraries and their networks) that exist and change with the needs of society they are functioning in. Such conceptual background highlights the need both for external (i.e. adoption and exploitation of achievements and knowledge of other disciplines – computer science, cultural studies etc.) and internal integration of knowledge within LIS domain (i.e. digitization in the context of library social functions, user services, collection management practices etc.).

A set of concepts such as social, cultural and cultural heritage informatics, exhibit a renaissance of the broad interdisciplinary approach to the informatics as a discipline on the intersection of information and computer sciences. Informatics is also approached in terms of derivative disciplines applied to specific fields of knowledge, such as biological informatics, health informatics, legal informatics, cultural informatics etc[6]. From this point of view social informatics is a research field that is concerned with *the social consequences of the design, implementation, and use of ICTs over a wide range of social*

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[3] Saracevic, Tefko, Dalbello, Marija (2001), "A Survey of Digital Library Education", Libraries in the Digital Age, LIDA 2001, available at http://www.ffzg.hr/infoz/lida/lida2001/present/saracevic_dalbello.doc

[4] Coleman, Anita (2002), "Interdisciplinarity: The Road Ahead for Education in Digital Libraries", *D-Lib Magazine*, Vol. 8, No. 7/8, available at http://webdoc.sub.gwdg.de/edoc/aw/d-lib/dlib/july02/coleman/07coleman.html

[5] cf Borgman, Christine (1999), "What are digital libraries? Competing visions", *Information Processing and Management*, Vol. 35, pp. 227-243.

[6] He, Shaoyi (2003), "Informatics: A brief survey", *The Electronic Library*, Vol. 21, No. 2, pp. 117-122.

and organizational settings[7]. The perspective of social informatics encouraged a new approach to digital libraries as sociotechnical systems that interweave technology, content, users within social context of creation and use of information[8]. This field reveals a social nature of digital library phenomenon and enriches the whole field of digital library research and education. On the other hand, there are other sub-fields of social informatics that provide other institutional perspectives of studies, such as museum informatics or cultural heritage informatics that covers all sector interested in cultural heritage communication in the digital age (i.e. libraries, museums and archives).

Conceptual framework

Early experiments with teaching "digital" disciplines reveal the need for integration of them into the general body of knowledge of LIS. Isolation of ICT-related disciplines from such themes as the main library functions and roles in society, library services and operational processes etc. has resulted in internal fragmentation within LIS domain. Both on the research and practical levels the consequences are concentration on narrow purely technological issues and producing applications or services that doesn't match the actual needs of the society (e.g. digitized collections on the web, accessible for all but at the same time not usable because of inconsistency with the needs or the level of skills of users; sophisticated cultural heritage applications that don't consider social, economic, cultural factors of real-life situation etc.).

Fragmentation and duplication of educational efforts emerge from isolation of museology, archival studies and LIS curricula. This results in narrow approach to cultural heritage when each of curricula mentioned above is focused at those aspects of cultural heritage problematics that refer to the appropriate professional field. Common issues and fields of knowledge are often ignored in spite of the fact that digitization of cultural heritage pose the same tasks and requires similar knowledge and skills (e.g. digital conversion, resource description and discovery etc.) for all fields.

Current research in "digital" education within LIS curricula identifies two approaches that enable to position studies of digitization of cultural heritage within a broader framework: 1) library-oriented approach that usually places digitization into the system of knowledge about concepts, processes, procedures, and tools related to creation and maintenance of digital libraries and 2) cultural heritage-oriented approach that provides an "umbrella" approach to the fields that earlier were developing independently, i.e. library and information science, archival science and museology. These approaches offer "pro" and "contra" arguments both in terms of theory and practice. Despite "memory institutions" being a buzzword in professional and academic literature there is still a lack of in-depth studies on the perspectives of convergence and/or networking of archives,

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[7]Sawyer, Steve and Rosenbaum, Howard (2000), "Social Informatics in the Information Sciences: Current Activities and Emerging Directions", *Informing Science*, Vol. 3, No. 2, available at http://www.inform.ru/Articles/Vol3/v3n2p89-96r.pdf

[8] Peterson Bishop, Ann, Van House, Nancy A. and Buttenfield, Barbara (2003), *Digital Library Use: Social Practice in Design and Evaluation*, MIT Press, 341 p.

libraries and museums. Despite the lack of theoretical comprehension anticipations of convergence or collaboration result from pressures of practice where increased user demands and ICT advances make networking of and the flow of knowledge between information profession communities a crucial pre-requisite for the development and delivery of adequate services. LIS education cannot ignore these trends and be interested only in digital library concerns.

Considering the complex and multilayered nature of studies in cultural heritage the term of "communication of memory" is offered as a conceptual background to contextualize the development of digitization courses and integrate them into the general body of LIS knowledge. Communication of memory refers to the fundamental social and communicational aspects that are crucial for LIS as well as for museology and archival science in determining why and how cultural heritage is preserved and spread. Social aspect reveals the social role of memory in any type of human community: 1) memory serves the needs of the present, enabling human beings to make sense of surrounding world and produce meaningful picture of the environment a person lives in (e.g. memory is crucial for such processes as learning) and 2) memory is shared and becomes a "glue" for the communities or societies at large bonding them with common practices, rituals and traditions. Communicational aspect refers to the ways memory is shared between human beings in time and space by employing 1) codes to express it (e.g. language), 2) media to transfer meanings (e.g. books, compact disks etc.) and 3) channels which are used to spread meanings (e.g. telephone, computer networks etc.). Communicational and social aspects of memory are interrelated: on one hand, the social role of memory to serve the interests of the present resulted in political, economical, cultural impacts on its communication and on the other hand codes, media and channels used to transfer meanings of memory shape its perception.

Being aware of the broadness of the suggested concept, authors are convinced that it provides a sound grounding for an integral approach to digitization motivated by essential library roles and functions not just technological innovation or "fashionable" teaching trends. Flexibility of this conceptual background allows a wide space for the development of courses on the different levels of knowledge complexity (from basic to in-depth knowledge), it assist in making links between associated LIS courses or themes (e.g. social roles of libraries, information society, information retrieval etc.) and place LIS knowledge within a broader framework by offering related disciplines as optional/compulsory courses (e.g. cultural studies, publishing etc.).

Structure and contents of digitization studies

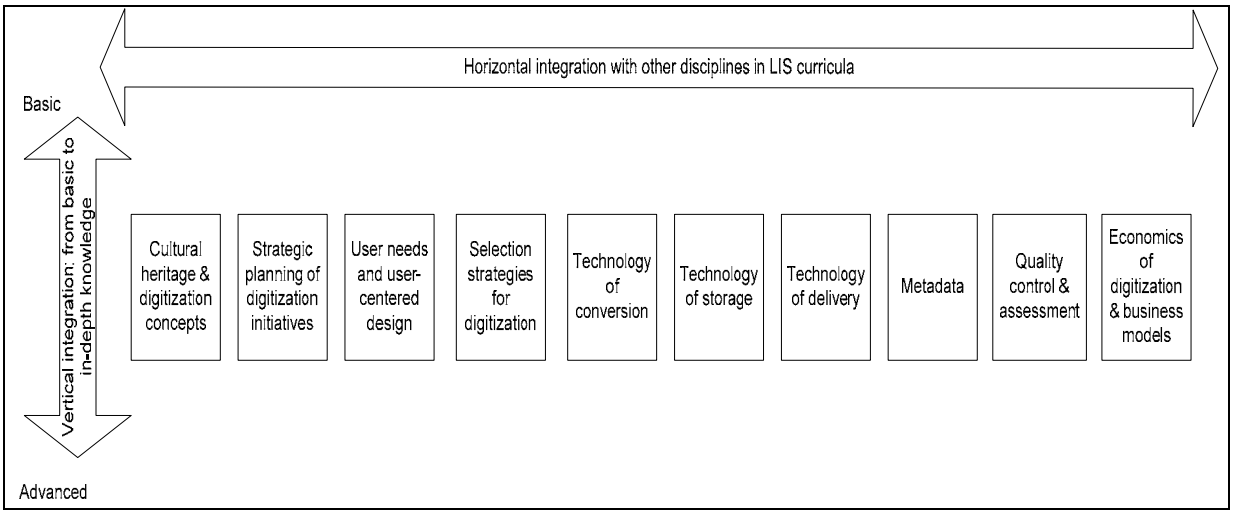
Structure and contents of studies in digitization of cultural heritage are based on a holistic approach which would enable a student to see diverse perspectives of the field, including philosophical, socio-cultural, managerial, and technological. Additional focus on specific areas of knowledge or skills could be ensured through specialized courses, continuous professional development programmes, and specific studies at master level. Suggestions

for the scope and structure of digitization disciplines within LIS curriculum are focused on the bachelor (undergraduate level) and master studies (graduate level).

The structure of digitization curriculum builds on two level of knowledge integration:

- Vertical integration that address complexity of digitization of cultural heritage and offers to distinguish between the depth of knowledge required.

- Horizontal integration that refers relation of digitization to other disciplines. In many areas digitization utilizes knowledge of different disciplines, including management, information retrieval; information processing etc., which are not new in LIS studies. Therefore, the relevant knowledge may be partly acquired through other disciplines represented in general LIS curriculum. This should fact should be considered in order to optimize study programmes and avoid duplication of efforts.



Scheme 1. The main themes of digitization of cultural heritage

The main themes for studying digitization in the context of LIS curriculum (see Scheme 1) highlight essential knowledge areas common for LIS as well as museology and archival science. On the one hand, this choice provides a holistic view on digitization phenomenon, thus preparing future LIS specialists for fruitful collaboration with other memory institutions. On the other hand, knowledge of each topic can be deepened or specialized by studying it on the different levels of complexity. Ten topics (as they shown in Scheme 1) are discussed below, taking into account different levels of complexity. Horizontal themes (i.e. ethics, multiculturalism, information and communication technologies, relations between libraries, museums and archives) permeating all LIS disciplines, are introduced in the context of cultural heritage digitization studies.

Cultural heritage and digitization concepts

Cultural heritage and digitization concepts are in the heart of the digitization disciplines. This conceptual background affects adequate understanding of the essential processes of communication of memory in the information society, functions and roles of memory institutions. Effective professional activities are impossible without gaining this knowledge (common results are inability to design cultural heritage services, inadequate digitization policies, lack of skills in contextualization and interpretation of cultural heritage objects/documents).

B. Fielden and J. Jokilehto define cultural heritage in a very broad sense as all possible signs that serve as an evidence of human activities and achievements in a certain time period[9]. Concept of cultural heritage and related terminology forms a framework both on theoretical and practical levels to understand the essential functions of and processes in memory institutions. On the theoretical level this terminological system provides a sound basis for distinguishing cultural heritage from non-heritage, understanding the underlying processes of transformation of objects or documents to cultural heritage. On the practical level it prescribes the main criteria for selection, appraisal, acquisition, retention and etc. procedures of cultural heritage assets in memory institutions. Digitization as a method of management of cultural heritage resources by producing digital surrogates requires to re-think traditional concepts (e.g. one of the most controversial concepts – „authencity of digital documents/objects“[10]).

At the undergraduate level an introduction into such concepts as culture, cultural heritage, typology of cultural heritage as well as digitization and memory institution is necessary. Communication of cultural heritage should be bridged with core library social functions. This knowledge partly could be acquired in the context of other disciplines. It is crucial to map the landscape of cultural heritage, defining different types and perspectives (e.g. tangible and intangible heritage; heritage typology in terms of media – written/oral/audio/visual/digital etc.), as well as operators of cultural heritage (archives, museums and libraries), emphasizing perspectives of and reasons for their collaboration. At the introductory level the concept of digitization is introduced as a practice for management of cultural heritage in the digital environment.

At the graduate level students are expected to demonstrate an in-depth knowledge of what communication of memory is. This involves interdisciplinary approach to the concept of memory (exploiting theories of history, cultural studies, and sociology) and introduction of such terms as collective memory, social memory and cultural memory. Political, economic, cultural, technological aspects of memory and associated issues (e.g. political factors and censorship, cultural factors and current trends in cultural monopolism versus cultural diversity, commoditization of knowledge and memory etc.) should be discussed. Understanding of changes in perception of and interaction with

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[9] Fielden, Bernard and Jukka Jokilehto (1998), *Pasaulio kulturos paveldo vietu bei vietoviu prieziuros gaires*, Vilnius, 141 p.

[10] Thibodeau, Keneth (2002) "Overview of Technological Approaches to Digital Preservation and Challenges in Coming Years", *The State of Digital Preservation: An International Perspective*, available at http://www.clir.org/pubs/reports/pub107/contents.html

cultural heritage in the digital environment (in the context of leisure, learning etc. activities) is crucial.

Strategic planning of digitization initiatives

A digitization initiative is a set of activities that requires long-term institutional commitment and significant investments of financial, human and material sources. Strategic planning of digitization involves producing necessary decisions in order to develop sustainable projects that meet user demands. In comparison to other disciplines strategic planning of digitization initiatives is the most dispersed and implicit domain based on knowledge and skills aggregated from other disciplines. In strict terms, strategic planning (the same as many of management disciplines) is both science and art. On the one hand, it is based on theoretical knowledge acquired from variety of disciplines such as management, LIS theory, information and cultural policy etc., on the other – it requires flexible combination of knowledge with ability to grasp current trends of environment, envision library in the dynamics of societal changes.

Strategic planning of digitization initiatives could be viewed from two perspectives which are inseparable in practice: 1) development of an idea and 2) producing a plan for creation and long-term management of digitized cultural heritage sources. Development of an idea involves analysis of the external environment from the political, economic, cultural, social and technological point of view. The idea of digitization project should fit into the broader context of developments and innovation in the cultural heritage domain (e.g. national and international policy and legal regulations, new types of services, application of different tools and techniques to build cultural heritage application, international standards and recommendations). Digitization is an integral activity of libraries and other memory institutions that fits into the context of other initiatives. An institution, undertaking a digitization project, should be ready to evaluate all positive and negative factors surrounding the initiative. Sustainability is ensured by thorough assessment of several aspects: relevance of the initiative to the mission of the institution, its position in the set of existent services, capabilities for long-term financial support, and a long-term programme for maintenance of digitized sources[11]. Strategic planning for long-term management of digitized cultural heritage sources involves allocation of necessary human (e.g. project team, staff involved in digitization workflow), material (e.g. accommodation, equipment etc.), and financial (e.g. internal organization resources, project grants, sponsorship etc.) resources, risk and time management, clarifying and solving copyright issues, establishing quality standards and control procedures, envisioning management of digitized collections in long-term perspective[12].

Designing the studies of strategic planning of cultural heritage digitization may become a challenge for LIS schools due to embeddedness of crucial knowledge in other disciplines. Dependency of strategic planning of digitization initiatives on the sound knowledge base in LIS and management disciplines prompts its higher relevancy for graduate courses.

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[11]Smith, Abby (2001), *Strategies for Building Digitized Collections, Council on Library and Information Resources*, available at http://www.clir.org/pubs/reports/pub101/contents.html

[12] Management the Digitization Project, Technical Advisory Service for Images, available at http://www.tasi.ac.uk/advice/managing/pdf/projman.pdf

However, strategic planning should be introduced as an important stage in the life-cycle of digitization management on the **undergraduate level**. Students should understand the sequence of decision-making at the planning stage and realize that managerial solutions precede technological. Decision-making cycle at the basic level of knowledge involves critical assessment of digitization advantages and challenges, uncovering "myths" of digitization and explaining situations when digitization is not an appropriate solution, formulation of project goal and objectives. At the **graduate level** strategic planning of digitization initiatives (it could be merged into a broader course on management of digitization projects) should focus at integration and application of students knowledge and skills in the realm of digitization initiatives. It is expected that students at the graduate level are knowledgeable of the main project management stages and decision-making processes. Therefore, participation of students in real digitization initiatives is desirable: placement in libraries, participation in the research projects undertaken by LIS schools.

User needs and user-centered design

User needs and user-centered design are topics that combine knowledge from different fields: LIS, marketing, human-computer interaction. This theme covers two main dimensions: 1) the knowledge of determining target groups of users and their needs in order to develop appropriate services, and 2) the knowledge how to make these services usable and accessible in technological environment, relying on the diverse factors of context of use (e.g. user features and abilities, aims and tasks, equipment, working conditions etc.). Defining user needs and development of usable and accessible services in the digital environment is related to different stages of digitization cycle, ranging from planning, development and quality control and assurance.

The term "market segmentation" and its techniques were adopted by LIS from marketing discipline. Market segmentation implies distinguishing target groups of consumers/users basing on their socio-demographic characteristics, location, lifestyle and other features[13]. In business market segmentation is a necessary pre-requisite for generating profit, while in libraries it becomes an enabler of user-oriented services.

In broad terms usability is understood as design solutions that enable user to reach his/her goals effectively, comfortably and efficiently while interacting with an ICT-based system. In ISO standards usability is understood from different perspectives: 1) as a set of pre-defined criteria hardware and software should meet to become usable and 2) as a user-centric process of the development of hardware/software that considers user goals, characteristics and environment. Both approaches offer certain advantages and drawbacks: established set of criteria provide a solid framework for usability assessment, but lack flexibility in specific situations, while a freedom to formulate usability criteria on demand put high requirements on the qualification of the staff. In the context of digitization studies usability knowledge should empower information specialists to apply existent usability criteria in flexible and creative ways.

[13] Piercy, N. (2000), *Market-Led Strategic Change*, Oxford, Butterworth-Heinemann, 665 p.

A necessary pre-requisite for guaranteeing usability of ICT-based systems, including cultural heritage applications, is accessibility. It encompasses user-environment relationships in a broad sense (e.g. physical, technological environment) and indicates barriers that prevent or limit user capabilities to function in a given environment (e.g. motor, visual, cognitive, hearing disabilities)[14].

Traditionally, **undergraduates** acquire basic knowledge about user segmentation and methods for determining their needs studying traditional LIS disciplines as library and information services. Digitization studies require extending this knowledge to cover challenges posed by the digital environment. Undergraduates need to obtain a basic introduction (at the instrumental level) into such topics as usability and accessibility, principles of good interface design, be aware of appropriate guidelines, organizations and initiatives (e.g. WAI –Web Accessibility Initiative). At the level of operational skills students are expected to perform a basic assessment of usability and accessibility of interfaces (e.g. navigation tools, organization of content, accessibility for disabled persons) of cultural heritage applications. **At the graduate level** user-centered design is introduced from several perspectives: 1) management of user-centered design through the whole process of the development of an application (library professional should be able to work both with users and an interdisciplinary team of system developers); 2) user-centered design as a quality management that covers methods to assess usability and accessibility of cultural heritage application (compliance with standards, user testing etc.); and 3) user features that encompass usability/accessibility studies of specific user groups (e.g. age, cultural, ability differences).

Selection strategies for digitization

Criteria for digitization of cultural heritage are not usually of equal weight, and not all may be relevant to all projects. The digitization project might be conducted in such a way to provide significant support for research and instruction, elementary school education, lifelong learning, leisure, promotion, cultural tourism, improvement of access or preservation of cultural heritage, as well as to reinforce a shared national consciousness and informed citizenship be linked to economic growth and job creation. Thus, selection process will depend upon the main purpose of such projects, availability of cultural heritage items, financial support, staff etc.

Factors that influence selection for conversion also include uniqueness of the materials, synergy with other activities in custodial divisions (such as preservation), the availability of suitable digitizing technology, and the value of the materials for education.[15]
The criteria that are applied have to help in building sustainable digital collection of cultural heritage items, improve access to it, make key content available more widely (e.g. provide access to items that cannot be handled otherwise', provide access for people with disabilities, provide items with sufficient intrinsic value to ensure ongoing use), concentrate on items of enduring value (artifactural features, historic importance,

[14] Glosiene A. and Z. Manzuch (2004), *Usability of ICT-based systems: state-of-the-art review*, CALIMERA Deliverable 9, available at http://www.kf.vu.lt/site_files_doc/usability_final.doc
[15] Arms, C. R. (1996), "Historical Collections for the National Digital Library", *D-Lib Magazine*, April, available at http://www.dlib.org/dlib/april96/loc/04c-arms.html

intellectual content), fulfill the needs of preservation, and conservation or 'rescue digitization' (the term used when digitizing rare documents that are suffering from continued use), increase demand for the collection.[16]

The initial set of working criteria for evaluating practice in creating, capturing and managing digital cultural heritage resources might be organized under six basic principles

1. Optimization of interoperability of materials
2. Enabling broadest use
3. Addressing the need for the preservation of original materials
4. Indication of a strategy for the life-cycle management of digital resources
5. Investigation and declarations of intellectual property and rights restrictions
6. Articulating intent and declaring methodology.[17]

Acknowledging that selection is most often driven by subjective responses, many institutions and funding bodies rely on some basic or/and advanced criteria that will help make selection decisions more objectively. The central elements of a selection process focus on several areas: audience, impact on institution, long-term value, intellectual control, intellectual property rights, preservation, and technical considerations. The sorts of questions which need to be addressed in formulating guides for selection procedures following Paul Ayris's[18] opinion can be grouped under the following heads: assessment, gains, standards and administrative issues.

Decisions to select materials for digitization should also be based on a business-like approach[19] that identifies target user populations, understands the needs and expectations of the users, identifies measurable deliverables that will demonstrate benefits, includes a promotion/marketing plan, provides itemized costing, and takes into account the work necessary for obtaining copyright clearance for the material to be digitized

At the undergraduate level student should be able to understand the reasons for different approaches in digitization processes and basic criteria for selection of material to be included in digital collections. Student should also recognize intentions of digitization of cultural heritage and its primary audience, meaning of long-term persistence, chosen level of faithfulness to an original or an intermediate, whether analog or digital and the issues relevant to suitability of digitized collections of cultural heritage surrogates for different levels of teaching, research, leisure etc.

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16 Cf Lee, Stuart D. (1998), "Why do you need to assess material?", *Appendix G: Assessment Criteria for Digitization*, available at http://www.bodley.ox.ac.uk/scoping/assessment.html

17 Core Principles and Evaluative Criteria (1999), available at http://www.ninch.org/programs/practice/criteria.html

18 Ayris, Paul (1998), "Guidance for selecting materials for digitisation", Joint RLG and NPO Preservation Conference: Guidelines for Digital Imaging, 28-30 September 1998, available at http://www.rlg.org/preserv/joint/ayris.html

19 Smith, Abby. (1999), *Why Digitize?* Washington, DC, CLIR, available at http://www.clir.org/pubs/reports/pub80-smith/pub80.pdf

At the graduate level student should understand the reasons and circumstances related to the digitization of cultural heritage, socio-cultural and economic implications and possible outcomes. They should be able to prepare a sample projects including issues related to the life-cycle management of digital resources. Ownership and rights issues have to be approached from different related points as to make students aware of their importance before starting digitization projects. They should be able to choose and imply relevant methods, understand perspectives and assumptions used by project, describe project's rationale, its intended scope, significance and funding base.

Technology of conversion

Technology of conversion refers to the specific techniques, which are used to convert original materials to digital form (i.e. digitization) and the techniques of converting digital materials from one format to another.[20] The primary concern in the digitization is to ensure a pre-defined reliability and fidelity of the new digital artifacts in comparison to the originals.[21] The technical issue is to provide automated measures to ensure the integrity and reliability of the conversion, as the digitized quantities are typically large or very large.

An issue related to the reliability and integrity concerns relates to the definition of sufficient fidelity. Technically the quality of representation is measured on various scales depending on the individual objects as the digital resolution of scanned documents, as the correctness of geometry and colours, or as the ratio of errors in optical character recognition (OCR). Different technologies afford several levels of qualities. The motivation for choosing a means to use depends on the available resources (time, staff, funding), and on the required level of accuracy, which is basically determined by the expected use of the material.[22] Fast and cheap techniques tend to produce less accurate and less structured digital aggregates, while more accurate and well-formed results require more resources. To produce a sustainable collection, a marginal is necessary to ensure a degree of changes in the usage requirements.

At the **undergraduate level** the students are expected to understand the basic relation between choosing a piece of digitization equipment (e.g. digital camera, scanner, laser

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[20] Introductions and guidelines: Kuny, Terry (1995), *An Introduction to Digitization Technologies and Issues. Network Notes #14*, Information Technology Services, National Library of Canada; Sitts, Maxine K. (2000), Handbook for Digital Projects: A Management Tool
for Preservation and Access. Northeast Document Conservation Center. Andover, Massachusetts; Minerva project references for good practices see http://www.minervaeurope.org/listgoodpract.htm for preparation and the digitization process.

[21] Ross, Seamus (2002), Position Paper on integrity and authenticity of digital cultural heritage objects, *DigiCULT Thematic Issue 1: Integrity and Authenticity of Digital Cultural Heritage Objects*, available at http://www.digicult.info/downloads/thematic_issue_1_final.pdf

[22] Chapman, Stephen and Anne R. Kenney (1996), "Digital Conversion of Research Library Materials: A Case for Full Informational Capture", *D-Lib Magazine*, October, available at http://www.dlib.org/dlib/october96/cornell/10chapman.html; Price-Wilkin, John (1997), "Just-in-time Conversion, Just-in-case Collections: Effectively leveraging rich document formats for the WWW", *D-Lib Magazine*, May, available at http://www.dlib.org/dlib/may97/michigan/05pricewilkin.html; "Conversion" in *Moving Theory into Practice: Digital Imaging for Libraries and Archives*, available at http://www.library.cornell.edu/preservation/tutorial/contents.html.

scanner) capable of some indicated technical quality, and the technical quality of the results. Undergraduates are also expected to gain some general practical experience on the actual digitization work to be able to recognize the critical issues of technical conversion accuracy. Students are further expected to possess a basic familiarity of the prevailing technologies for digitization (manual digitization, digital cameras, scanners, laser scanners and photogrammetry). **Graduate level** students are expected to be able to make informed decisions concerning the adoption of different technologies from the information point of view. Students are also expected to be able to have a level of knowledge, which enables the evaluation of emerging technologies and their comparison with competing alternatives.

Technology of storage

Storage issues in cultural heritage digitization and digital collections management comprise of 1) technical concerns and 2) issues of storage management. Technical aspects involve adequate means to store digital material in a sustainable manner with adequate emphasis on both technical and organizational aspects. At the present the central problem of storage from the technical point of view is the lack of reliable data on the physical tenability of diverse digital storage media.[23] From the organizational perspective the principal issue is how to ensure the continuing accessibility of vast heterogeneous collections of digital data stored over time in diverse formats often using highly specialized hardware and software.[24]

The storage management perspective places emphasis on the inseparability of technical and organizational storage concerns of the entire lifecycle of digital resources. Primary tasks comprise protection and maintenance of resources, monitoring and ensuring their integrity, authenticity and usability over time. In spite of the generally non-technical focus of LIS studies, an information specialist needs a thorough understanding of the available technologies and their implications on the management and the sustainability of information assets.

At the **undergraduate level** students are expected to understand the basic relation of technical storage decisions (e.g. choice of media, environment) to the subsequent usability and manageability of the collections, and the importance of enforcing a standard set of guidelines for the storage. At an instrumental level the students are expected to be informed of the fundamental characteristics (e.g. lossy and lossless compression, machine-readability) of the most pertinent storage technologies (optical and magnetic media and their durability) and their implications on the practice of digitization. Students should be also aware of the political and juridical issues of storage including property rights and issues of ownership. An instrumental level knowledge of the prevailing national and international conventions and standards is required.[25] At **graduate level**

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[23] Navale, V. (2005), "Predicting the Life Expectancy of Modern Tape and Optical Media", *RLG DigiNews* Vol. 9, No.4, available at http://www.rlg.org/en/page.php?Page_ID=20744#article3

[24] Zorich, D. (2003), *A Survey of Digital Cultural Heritage Initiatives and Their Sustainability Concerns*, Council on Library and Information Resources (CLIR), available at http://www.clir.org/pubs/reports/pub118/pub118.pdf

[25] For references see e.g. http://www.minervaeurope.org/listgoodpract.htm#preserv

students are expected to be able to evaluate available storage techniques, methods and technologies, to develop practicable guidelines, and to make informed policy decisions concerning their implementation in sustainable short and long term storage of cultural heritage assets.

Technology of delivery

Delivery perspective of digital cultural heritage assets resides in the crossroads of broader discussions on the LIS perspective of information dissemination and related disciplines of communication and publishing. From the cultural heritage digitization viewpoint the notion of delivery concerns technical and policy issues relating to the effective and efficient dissemination of digital information in context.[26] Consideration of user issues, including needs, behaviour, evaluation[27] and usability are essential for a successful outcome as is a thorough understanding of the intellectual and economic factors[28] affecting information processes. Delivery technology concerns apply not only the actual delivery, but the complete organization wide information infrastructures and processes, which all support a successful delivery.[29]

Undergraduate level students are expected to familiarize themselves with the overall layout of digital delivery process (e.g. analysis, delivery management, and basic economics of delivery) and prevailing technologies for digital information dissemination (e-publishing, database user interfaces and reporting, digital libraries and delivery portals, CD-ROM/DVD publication, document-on-demand services). Focus of the studies should be placed on the practical issues of digital delivery in organizations and understanding how delivery methods match different users and their information needs. **Graduate level** students are expected to express a more thorough understanding the field of digital delivery. After the studies the students are expected to be able to manage delivery processes, to be able to make decisions of adapting applicable delivery methods for use in diverse organizations and to develop delivery services in cooperation with specialists of related fields.

Metadata

Metadata and its adequacy are a central concern of the management of digitized cultural heritage resources. Cultural objects such as historical records and artefacts are only seldom adequately self-explanatory for any degree of automated retrieval. Digital cultural heritage has to be supplied with metadata to become discoverable and subsequently

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[26] Crane, Gregory and Wulfman, Clifford (2003), "Towards a Cultural Heritage Digital Library", JCDL '03: Proceedings of the 3rd ACM/IEEE-CS joint conference on Digital libraries, IEEE Computer Society.

[27] Choudhury, Sayeed, Hobbs, Benjamin, Lorie, Mark and Flores, Nicholas (2002), "A Framework for Evaluating Digital Library Services", *D-Lib Magazine*, Vol.8, No. 7/8, available at http://www.dlib.org/dlib/july02/choudhury/07choudhury.html

[28] E.g Tanner, Simon and Deegan, Marilyn (2003), "Exploring Charging Models for Digital Cultural Heritage in Europe", *D-Lib Magazine*, Vol.9, No.5, available at http://www.clir.org/pubs/reports/pub80-smith/pub80.pdf

[29] E.g. Veen, Theo van (2005), "Renewing the Information Infrastructure of the Koninklijke Bibliotheek", *D-Lib Magazine*, Vol. 11, No. 3, available at http://www.dlib.org/dlib/march05/vanveen/03vanveen.html; information delivery production process e.g. England, Elaine and Finney, Andrew (2002), *Managing Multimedia: Book 1: People and Processes*. Addison Wesley.

usable. Central concerns of cultural heritage metadata are its sustainability, standardization and instrumental sufficiency of descriptions. Diversity of the resources, problem of describing textually non-textual entities,[30] subjectivist valuation of cultural heritage, multiplicity of interpretations, paradigmatic changes in related disciplines, cultural diversity and broad scale of user needs are only few of the issues hindering the development of efficient schemes.

Undergraduate level of education in metadata of digital cultural heritage should provide instrumental level knowledge and skills to produce and use metadata related to a diversity of cultural heritage resources (incl. text, physical objects, images, audio etc. resources). The knowledge ought to be coupled with a service knowledge of archival, museum and bibliographical principles of description. In addition the students are expected to have basic familiarity of the prevailing national and international metadata schemes,[31] classification systems and ontological frameworks (e.g. CIDOC-CRM[32], TEI[33], SPECTRUM[34], Dublin Core[35], ICONCLASS[36], XML[37], OWL[38], Semantic Web[39]) and to be aware of computer aided metadata tools (e.g. METAe[40], Dublin Core tools[41]).

Graduate level students should show more thorough understanding of the description of cultural heritage resources. Students are expected to acquire an adequate understanding to evaluate ontologies and metadata schemes and to make decisions concerning their adoption or rejection. In addition a more thorough knowledge of the major schemes and their working principles is required to allow the person to adapt and accommodate existing metadata schemes to use, and to possess the basic expertise to construct new schemes.

Quality control and assessment (QC&A)

Quality control and assurance of digitization of cultural heritage is seen as a process of checking and rechecking of the quality, legibility, and accuracy of the content, user access methods, technology used, delivery media, and new formats for preservation of digital cultural heritage. Since all these issues could be and are thought at different levels in LIS schools (e.g. building digital collection, user studies, ICT related courses, metadata) here we will concentrate upon procedures and practices that are employed to ensure the consistency, integrity and reliability of the digitization process as well as quality, authenticity, integrity, and reliability of digital material. These processes and

[30] Vatanen, I. (2003), "Deconstructing the (re)constructed: issues on annotation of the archaeological virtual realities", CAA2002 The Digital Heritage of Archaeology, Computer Applications and Quantitative Methods in Archaeology, Proceedings of the 30th Conference, Heraklion, Crete, April 2002.
[31] For references see e.g. http://www.minervaeurope.org/listgoodpract.htm#meta
[32] The CIDOC Conceptual Reference Model (2004), available at http://cidoc.ics.forth.gr/
[33] TEI: Yesterday's information tomorrow, available at http://www.tei-c.org/
[34] MDA, available at http://www.mda.org.uk/spectrum.htm
[35] Dublin Core Metadata Initiative (2005), available at http://dublincore.org/
[36] ICONCLASS, available at http://www.iconclass.nl/
[37] XML Core Working Group Public Page (2004), available at http://www.w3.org/XML/Core/
[38] Web Ontology Working Group, available at http://www.w3.org/2001/sw/WebOnt/
[39] Semanticweb.org: Together towards a web of knowledge, available at http://www.semanticweb.org/
[40] METAe: The Metadata Engine Project, available at http://meta-e.aib.uni-linz.ac.at/
[41] Dublin Core Metadata Initiative: software and tools (2005), available at http://dublincore.org/tools/

features related to digitized cultural heritage are crucial to users at all levels, whether scholars, teachers, students, or researchers.

The notion of quality (or 'goodness' as indicated in NISO[42]) of digital collections and services was raised to include new elements, including indicators of quality control and assessment that emphasize factors contributing to interoperability, reusability, persistence, verification, documentation, and support for intellectual property rights.
For all classes of digital materials three measures of quality can be used: completeness, fidelity or faithfulness to the original, and legibility. Within these measures one can also make the distinction between subjective and objective measures[43].
The other possible approach to QC&A is to look at the differences between the quality assessment of people and systems and the quality assessment of products. In the former case, attention is usually paid to assess the capacities of the staff and of the systems and products used during the digitization and quality assurance process.

Since emergence of digitization on a larger scale many institutions & individuals from different scientific disciplines got involved in projects contributing to the field with many practical developments. Since there are large expenditures in research & practice related to digitization, use of digital material is growing exponentially. Still, quality control and assessment issues are in their premature phase.

The question is how to approach evaluation in the digitization field: from the point of view of technology or web resources and portals, or uses perspectives?
In literature there are several approaches discussed[44]:
In these studies widely diverse approaches were used, like the systems-centered approach, human-centered approach, usability centered approach, ethnographic approach, anthropological approach, sociological approach and the economic approach. The QA might be conducted to assure the quality of constructs, chosen criteria or methodologies as well as to study contextual impact of the project.

Most prevalent are studies of performance assessing, effectiveness and/or efficiency that usually help in deciding about design or operations of the digital library. Also widely conducted are studies of users' behavior such as information seeking, browsing, searching as well as assessment of different features (e.g. use of portals). that might have implications for design, but indirectly rather than directly. Levels of quality control and assessment might be looked at from the point of view of micro or macro or some temporal aspects (such as duration of technology used). Assessment is required on a macro scale to verify that the completion of the project is possible bearing in mind the constraints of time, money, and competing priorities for limited resources,

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[42] NISO (2004), Framework Advisory Group, *A Framework of Guidance for Building Good Digital Collections*, 2nd Edition. Bethesda, NISO Press.
[43] Core Principles and Evaluative Criteria (1999), available at http://www.ninch.org/programs/practice/criteria.html
[44] Cf, for example Borgman, Christine (2005), "Evaluationg the uses of digital libraries", DELOS Workshop on Evaluation of Digital Libraries, Padova, Italy, 4 October 2004, available at http://www.delos.info/eventlist/wp7_ws_2004/Borgman.pdf; Saracevic, Tefko (2005), *Evaluation of digital libraries: an overview*, available at http://www.scils.rutgers.edu/~tefko

and should indicate that the project will be able to deliver the digital material to a satisfactory technical standard being at the same time cost-effective.

Criteria for evaluation that relates to quality control issues in general or judging upon particular aspects of DL are still missing as for basic and standardized criteria. Probably most used is usability criteria in relation to the content of certain DL, processes that occur during interconnection between user and the DL, format offered through digital services or overall assessment.

At the undergraduate level it might be expected that LIS students understand the reasons for quality control and assessment in digital environment and that are acquainted with basic criteria in evaluating digital products and services. The notions of accessibility, availability, complexity, clarity, transparency, informativeness, coverage etc. have to be explained and strengthened by appropriate examples. At this level student should understand features of digital format such as its attractiveness, consistency, representation of concepts and communicativeness of messages. On a sample of the analog materials students have to understand capture settings and implement threshold guidelines for rejecting digital material that does not meet the quality criteria. This should be undertaken for each type of material to be digitized and for each of the different types of output that the deliverable will take. In this way, different QC procedures, and possibly different methods of QA, will be discussed and chosen for different types of material. Students are expected to recognized when digitized object has not the correct size or is in wrong resolution, wrong file format, wrong mode or bit-depth as well as other features such as overall light problems (e.g. too light), loss of detail in highlights or shadows or voice, poor contrast, uneven tone or flares, missing scan lines or dropped-out pixels, lack of sharpness etc. Since the QC procedures in place for the digital deliverables involve sets of complete checks on each item, students are expected to know the basic ones and to be able to produce them on different deliverables.

At the graduate level students should be able to conduct individually or in groups pilot evaluation projects related to the chosen content (of a portal or site) by applying certain criteria. Special attention has to be laid upon navigation features, finding and evaluating digital resources, to be able to judge about effort and time involved in carrying out these performances and offer professional support to users in achieving their tasks as well as to interpret recognized difficulties, error rate etc. Students have to understand the notions of user satisfaction, success, relevance, usefulness of results obtained, impact, value, clustering, functionality, and optimization. They should be acquainted with most important technology performance issues such as response time, processing time, speed, capacity, load, maintainability, scalability, interoperability as well as with advanced elements of evaluation of economic side of digitization projects. To ensure the correctness and informational quality of the digital materials created, students have to understand the need to ensure the integrity of the data files themselves over the long term, and to be able to check the integrity of files as they move through the workflow and are transferred from medium to medium. They should be familiar with procedures of checking the storage media at intervals to guard against failure and data loss. The issues

of the quality of the media on which digital objects are stored have to be understand in its relation to longevity and robustness,
As methodology is concerned when discussing issues in QC&A it is expected that students are familiar with basic methods (such as surveys, interviews, observations, focus groups, task performance, log analysis, usage analysis, experiments, record analysis, case study etc).

Economics of digitization and business models

Economics and business opportunities have been traditionally a rejected sector in cultural heritage information management. Only relatively recently the subject has raised urgent interest.[45] Economics of cultural heritage comprise both the value of the culture,[46] the aspect of delivery income and dissemination of cultural heritage, and the aspect of processing cultural heritage in an economic manner. Both perspectives have been rightly emphasized in the recent literature.[47] A central aspect of economics in cultural heritage work relates to temporal dimension of activities. The economy of operations needs to be planned in a sustainable manner. The income generation, the processing costs and the activity of organizations span typically over multiple decennia and centuries. Therefore, decisions based on short-term economic and operational calculations risk at causing increased long-term costs and endangering the sustainable existence, validity and usability of the collections.[48] Another fundamental issue of economics in cultural heritage sector is the question of ownership. Cultural heritage is basically agreed to be public domain, even though in practice, it is usually treated as a state property. Accordingly the basic assumption is that cultural heritage services should be affordable, but not necessarily fully gratuitous as the service does cost even if the resources themselves ought to be available free of charge. The central concern of economics and business perspective in digitization is the maintenance and development of costs and business opportunities awareness in the cultural heritage information sector.

Undergraduate level studies in the economics of cultural heritage information are expected to comprise an introduction to the basic differences between general information economics and the economics of cultural heritage. Students are required to understand that every phase of digitization and subsequent cultural heritage information work costs, and to make instrumental comparisons between the economic feasibility of various operations and transactions from the organizational and customer oriented viewpoints. Students should also be acquainted with some basic examples of cultural

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[45] Towse, Ruth (2003), *A Handbook of Cultural Economics*, Northhampton, MA, Edward Elgar Pub.
[46] Throsby, David (2001), *Economics and Culture*, Cambridge University Press.
[47] Scale, G. et al. (2001), "OpenHeritage: Enabling the European Culture Economy", *Cultivate Interactive*, Issue 5, available at http://cultivate-int.org/issue5/; Zorich 2003; Hjorth-Andersen, C. (2004), *The Danish Cultural Heritage: Economics and Politics*. *Discussion Papers 04-33*, University of Copenhagen, Institute of Economics.; Ginsburgh, V. A. (ed.) (2004), *Economics of Art and Culture*, Elsevier; Additional references e.g. in the Proceedings of ICHIM03 (http://www.ichim.org/ichim03/)
[48] Throsby, David (1995), "Culture, economics and sustainability", *Journal of Cultural Economics*, Vol.19, No. 3, pp.199-206; Zorich, Diane M. (2003), A Survey of Digital Cultural Heritage Initiatives and Their Sustainability Concerns, http://www.clir.org/pubs/reports/pub118/pub118.pdf; Bishoff, Liz and Allen, Nancy (2004), *Business Planning for Cultural Heritage Institutions*, available at http://www.clir.org/pubs/reports/pub124/pub124.pdf

heritage information related businesses, and encouraged to consider cultural heritage information work from the viewpoint of economics and emerging business potential. **Graduate level** studies provide students with skills and knowledge to calculate costs related to the various tasks related to the digitization process. Students should be also taught how to mark a cost-based price of digitization services and the subsequent digitized information resources for a customer. Furthermore the post-graduate studies should place emphasis on the economical aspects of the entire process of digitization, to evaluate working methods and technologies based on their economical feasibility and to understand the importance of total-cost calculations.

Horizontal themes

Cultural heritage digitization studies involve a number of horizontal themes, which permeate into each specialized subject. These themes are ethics, multiculturalism, information and communication technologies, relations between libraries, museums and archives etc. In spite of these several themes discussed below it should be noted that parallels with other important LIS horizontal topics and values, such as free access to information, intellectual property rights, social cohesions etc. may be possible.

Communication of memory in libraries, as well in archives and museums is associated with a number of situations in which decisions should be guided by **ethical** values of the profession. Examples of situations and solutions may include:

- Resistance to censorship or pressures that often occur when making the decision to exhibit cultural heritage resources that are evaluated in contradictory fashions by different social groups.
- Making appropriate decisions when selecting material for digitization and identifying user needs. Cultural heritage professionals should be able to evaluate ethical consequences of and avoid discrimination of certain user groups (e.g. cultural minorities etc.), exhibiting material that could lead to conflicts between diverse communities.
- Safeguarding confidentiality of user private data, stored in the cultural heritage information systems.

Modern societies, shaped by globalization consequences, increasingly become **multicultural**. The vital function of memory is social integration and differentiation which allows diverse communities to define their uniqueness and boundaries in the mosaic of other communities. Communication of memory and cultural heritage as its material expression provides a solid ground for safeguarding cultural diversity and building socially inclusive multicultural society. Library and information specialists who plan and implement digitization initiatives should be able to address issues and challenges that arise in multicultural society (e.g. issues of cultural minorities, emigration etc.).

Access to and safeguarding of cultural heritage increasingly depends on **information and communication technologies**. Management of cultural heritage resources, developing services to different communities is influenced by technological environments and tools, which overgrew mere function of communication channels and devices and became a

social and cultural space. The major task of modern library and information specialists is to explore and adopt in creative way opportunities that are offered by information and communication technologies to create services that meet user demands.

Relations between libraries, archives and museums are in the centre of digitization studies where collaboration of memory institution becomes an essential pre-condition for effective management of cultural heritage in the digital space. Blurring institutional boundaries provide inspiring opportunities for collaboration networks, including even wider number of partners, such as historical societies, universities, commercial sectors etc. However, different communities of practitioners should be able to overcome conventional institutional and professional barriers to explore networking possibilities

Learning outcomes and teaching methods

Digitization disciplines may be viewed in terms of the knowledge and skills they provide. According to Christine Borgman several types of knowledge may be distinguished: conceptual, semantic and syntactic knowledge and technical skills[49]. Conceptual knowledge refers to the essence, features and main laws associated with the studied phenomenon. In the context of digitization studies conceptual knowledge allows to answer the questions about the role and place of digitization as a practice of communication of memory in technological environment. Conceptual knowledge is not expressed in practical skills but it enables their rational and relevant application in real-life situations. Semantic and syntactic knowledge, which for the purposes of this chapter may be generalized as operational, refers to mastering of processes, procedures, techniques related to technological and management aspects of digitization. And finally, technical skills enable to work with equipment (e.g., scanners, digital cameras etc.) and information systems used in digitization processes. Knowledge and skills acquired in the course of digitization studies could be summarizied on the basis of C. Borgman classification, as it is shown in the Table 1. Taking into account the abstractiveness and comprehensive nature of the proposed model of digitization studies, learning outcomes are aimed at illustrating the main ideas and don't claim to provide an exhaustive list of knowledge.

[49] Cf Bawden D., Vilar P. and Zabukovec V. (2004), "Competencies and capabilities for the digital library", *Online Information 2004 Proceedings*, available at http://www.online-information.co.uk/2004proceedings/thursam/bawden_vilar_zabukovec.pdf

Type of knowledge	Learning outcomes
Conceptual	1. Describe the processes of cultural heritage communication and its political, economic, technological, social and cultural implications; identify the main stakeholders and their roles. 2. Understand and describe digitization of cultural heritage and evaluate its impact on the activities of libraries, museums and archives. 3. Identify and describe the use of cultural heritage in the diverse social contexts (e.g. learning, enjoyment, community activities). 4. Understand the nature of digital information, its main features, and transformations of information in the digital environment. 5. Understand and distinguish social and technological aspects of cultural heritage information systems.
Operational	1. Demonstrate the ability to make decisions on digitization initiatives basing on the critical evaluation of advantages and challenges in concrete situation. 2. Demonstrate the ability to develop ideas for and plan digitization initiatives. 3. Develop user-centered digital services based on established procedures of user segmentation and analysis of user demands and abilities. 4. Operate and be able to apply international and national legislation, concerning intellectual property rights. 5. Demonstrate the ability to manage human, material and financial resources during digitization initiatives. 6. Be able to apply content and technological standards related to digitization processes. 7. Be able to ensure sustainability and quality of ICT-based cultural heritage systems and services.
Technical skills	Acquire the basic required skills in the practices of digitization including the working competence in prevalent digitization technologies and methods, and a level of technical understanding to develop these skills further through training and continuing education. The skills may include: 1. operating scanning devices and digital cameras; 2. operating image processing applications; 3. operating XML editors etc.

Table 1. Learning outcomes of digitization studies

In the light of pedagogical processes each type of knowledge corresponds to the certain teaching methods that assist in comprehension of knowledge provided, it's verification in real-life or simulated situations etc.

Type of knowledge/skills	Teaching methods	Teaching environments/tools
Conceptual	Lectures, discussions, seminars, break-out groups	Auditorium, distance learning environments, electronic discussion forums
Operational	Teamwork, case-based reasoning, practical activities	Auditorium, placement in libraries and/or other memory institutions, distance learning environments, groupware
Technical	Practical activities	Laboratories, computer classes, placement in libraries and/or other memory institutions

Table 2. Correlation between knowledge types and teaching

Comprehension of different types of knowledge is associated with diverse cognitive activities of the students. Effectiveness of teaching digitization is closely related to the choice of appropriate pedagogical methods (as it is exhibited in Table 1). Thus, discussions, seminars, roleplay or debates in break-out groups is a stimulating teaching methods in case of conceptual knowledge, aimed to encourage critical and creative thinking. The value of these methods is opportunities to see different perspectives of the concept or phenomenon, to provide sound arguments for one's opinion and to assess other views critically. In contrast to conceptual, operational knowledge should be enacted and requires simulated or real-life situations to verify it. Higher education institutions all over the world increasingly practice project-oriented teamwork, often involving students into real projects in memory institutions or faculties. Development of technical skills requires "learning by doing" in laboratories or other environments. Teaching processes may take place in auditorium, virtual environments or as a professional training in memory institutions.

Conclusions

Digitization of cultural heritage is a dynamic and constantly evolving field of research, which is at the early stage of its development, remarkable for integration of knowledge on the intersection of diverse disciplines and comprehension of accumulated practical experience. Most of the digitization domains are not well-established systems of theoretical knowledge but rather experimental and often containing controversial issues (e.g. economics of digitization and business models). Complexity of the field becomes a challenge for designing the scope and structure of the relevant courses and allows explaining current orientation to operational knowledge and practical skills detached from sound conceptual framework in LIS curricula.

As many disciplines emerged on the intersection of computer science and LIS the development of digitization of cultural heritage at certain stages was shaped by technological determinism. However, recent research and discussions in LIS academic community indicate a tendency to integrate digitization into LIS system of knowledge, shifting the focus from digitization as a mere tool for library computerization to highlighting and exploring its impact on library functions, roles and operation. The change of values and priorities provides a positive stimulus and direction for the development of education in cultural heritage digitization, enriching digitization studies with philosophical, social, cultural, managerial, political, and economical aspects.

Digitization of cultural heritage intensified LIS interest in cultural heritage domain, which was not in the focus of LIS until recent developments in new technological solutions and emergence of the concept of "memory institutions". On the one hand, it pre-conditions the present lack of conceptual basis in cultural heritage studies within LIS, but on the other − opens new perspectives for interdisciplinary dialog between the different fields of cultural heritage. In this light a new direction for the development of research as well as educational models in LIS is provided by the conceptual framework of memory communication that determines libraries, museums and archives as a united institutional system mission and activities of which are shaped by spread and preservation of cultural heritage in society and stimulates the studies of ICT in the context of evolving means of communication of cultural assets. However, success of the future developments in LIS education in digitization of cultural heritage, based on this interdisciplinary concept, will depend on the synergies between LIS, archival science, museology and computer science.

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The CIDOC Conceptual Reference Model (2004), available at http://cidoc.ics.forth.gr/

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Core Principles and Evaluative Criteria (1999), available at http://www.ninch.org/programs/practice/criteria.html
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3 Information Literacy and Learning

Sirje Virkus
Albert K. Boekhorst
José A. Gomez-Hernandez
Annette Skov
Sheila Webber

Introduction

This chapter is based on discussions which took place in the virtual workshop and the face-to-face (F-2-F) workshop on information literacy and learning. The virtual forum took place from May to August 2005 and face-to-face workshop on August 11-12, 2005 in Copenhagen. The goal of the workshops was to discuss the most relevant issues on the topic "Information Literacy and Learning" in connection with Library and Information Science (LIS) curriculum in the context of the Bologna process. The structure and logic of the virtual and F-2-F workshops were similar in all twelve workshops within the SOCRATES-funded project "LIS Education in Europe: Joint Curriculum Development and Bologna Perspectives". The list of the members of the virtual and F-2-F workshop group on information literacy and learning is included as Appendix 1.

The participants of the workshops addressed the following questions:

- How should we define information literacy (IL) in connection with LIS curriculum?
- How should IL be positioned in LIS curriculum?
- How should learning to become "information literate" and learning to facilitate learning of IL be delivered in LIS schools?
- What topics form the curriculum for IL and learning?
- What approaches, strategies and actions have LIS schools implemented in integrating/embedding IL into LIS curriculum?
- What are the examples of best practice of facilitating IL within the LIS curriculum?
- How has the Bologna process influenced IL and LIS curriculum in different countries?
- What communication and networks for LIS educators in IL domain exist?
- What kind of research agenda we need in connection with IL and LIS curriculum?

The topics discussed in the virtual and F-2-F workshops are reflected in the following sections: the definition and importance of information literacy, how learning to become "information literate" and learning to facilitate learning of IL should be delivered in LIS schools, what topics form the curriculum for IL and learning, examples of IL practice, communication and networks for LIS educators in IL domain and research agenda for IL.

Definition of information literacy

The members of the virtual forum agreed that a broad definition of IL from the Prague Declaration, the Chartered Institute of Library and Information Professionals (CILIP), the American Library Association (ALA), Webber and Johnston or Boekhorst were most useful in general and as a working definition for the purpose of the forum.

For example:

> "Information Literacy encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of life long learning" (Information Literacy Meeting of Experts, 2003)
>
> "Information literacy is knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner" (CILIP, 2005).
>
> "To be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association, 1998)
>
> "Information literacy is the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with critical awareness of the importance of wise and ethical use of information in society" (Johnston and Webber, 2003).
>
> "... all these literacies [basic literacy, scientific literacy, technological literacy, visual literacy, cultural literacy] can be considered as specific competences that belong under the information literacy umbrella. Therefore information literacy should be considered as a container concept, which refers to competences of people to recognize the need for information and to satisfy their information needs for survival, self-actualisation and development" (Boekhorst, 2003a).

Boekhorst (2003a) summarises the definitions and descriptions which have been presented over many years into three concepts: (1) the ICT concept; (2) the information (re)sources concept; and (3) the information process concept. However, not all participants agree with his statement and argue that these three concepts do not include all dimensions of IL.

It was also agreed that the term 'information literacy' is the wider and more suitable term than 'information skills' to carry the meaning of the concept.

Thus, the working definition of IL that guided discussions in the virtual forum on IL and learning was broad, and could be seen as an umbrella definition that included many other literacies and implied business as well as private life in the context of lifelong independent and flexible learning.

Importance of information literacy

It was agreed that IL is absolutely critical literacy to all sectors of society and that it enables people to cope successfully in their professional and personal lives and benefit from the knowledge society. Boekhorst (2003b) highlights the technization, differentiation and globalisation process of our modern society and notes that in this process we see the following effects related to information flows: (1) a exponential growth of information, information media, information channels and information services (2) a growth of technology, tools and applications to retrieve, process and disseminate information (3) changes in communication patterns and behaviour. Thus, while people move forward through time and space (Dervin & Nilan, 1986) they need knowledge: knowledge on themselves and on their social and technical surrounding. While moving forward people are confronted with the fact that their knowledge is not enough to go on with their activity, to make decisions or start a new activity. There is a knowledge gap and an information need. Such a situation can arise because something changes in a person or in his or her surroundings. Depending on the importance of the situation and the degree of uncertainty, a person will search for information to satisfy an information need, to reduce uncertainty and update his or her knowledge. In this way people can survive, develop themselves, perform tasks and relax.

The process of recognising and identifying an information need, and of locating, accessing, retrieving, using and disseminating information has been presented by Boekhorst (2003b) in the following way in Figure 1

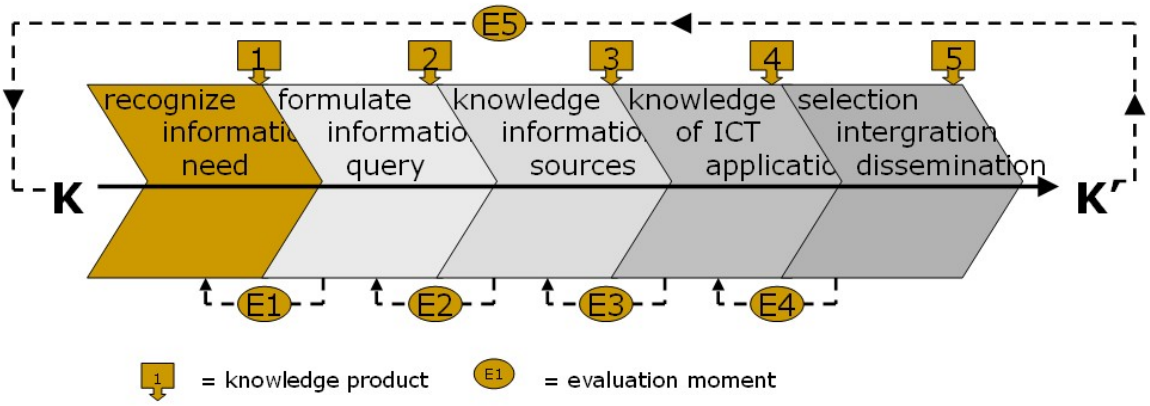

Figure 1. Information literacy model

Boekhorst (2003a) also provides a framework for information literacy/illiteracy in information-rich versus information-poor contexts.

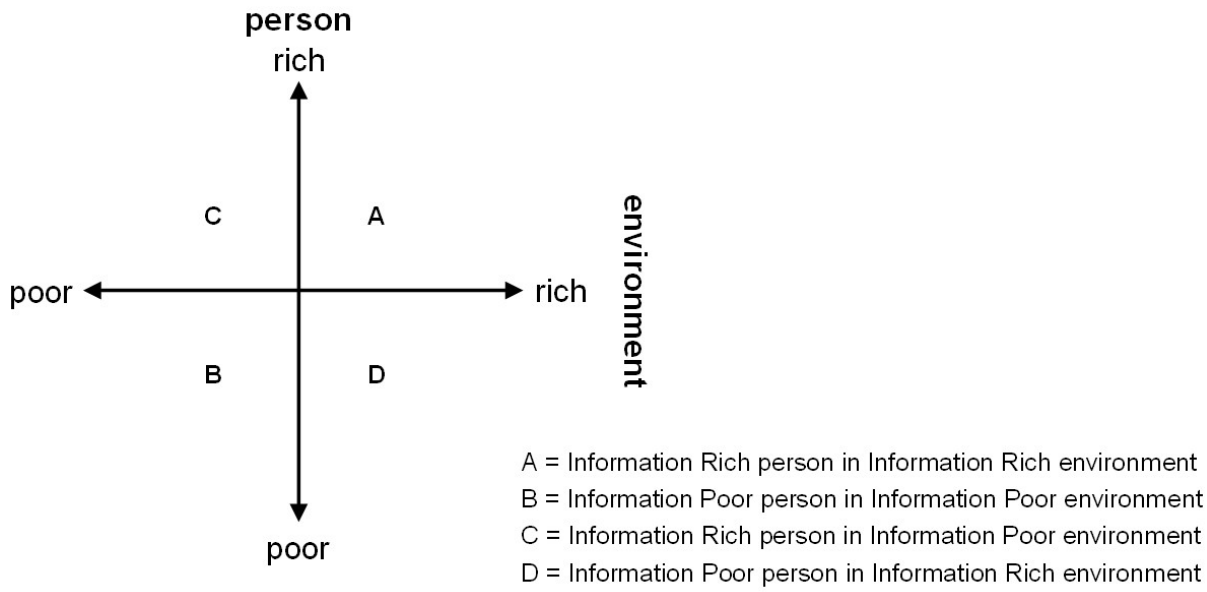

Figure 2 Information Rich – Information Poor

Boekhorst (2003a) notes that being information literate must be learned. 'Parents' are the first who implicitly and explicitly facilitate their children's learning of information. Becoming information literate should continue at primary school and be a part of formal training in all phases and all subject areas during the whole education process as a preparation for lifelong learning. Although a difference can be made between content and conduit, becoming information literate can only be learned effectively in context. Therefore in each phase of schooling in each subject explicit attention has to be given to IL aspects. In this way students are prepared for a lifelong learning process. That means that all educational staff have to learn how to integrate IL into their teaching.

The teaching and learning of information literacy within LIS curriculum

Library and information professionals too have a specific function in the process in which people become information literate. They facilitate access to information and help people to satisfy their information needs. Facilitating people to become better independent information users is one of their tasks. They too have to learn to do this effectively.

It was contended that it is essential for LIS students:
1. To be aware of information literacy as a concept;
2. To become information literate themselves;
3. To learn about some key aspects of teaching information literacy.

It was highlighted that being information literate is a necessity for information professionals because it helps them maintain a lifelong learning attitude that keeps them abreast of an ever changing information environment, while at the same time it enables

them to develop as facilitators of learning to help users become information literate. LIS students need to understand THEMSELVES as information literate people, and understand IL holistically, before they can start teaching someone else about it. Perhaps some educators have an underlying assumption that LIS students become information literate by studying library and information science? It's not necessarily so!

IL itself may be taught through a separate class, or may be covered explicitly in one or more other LIS classes (e.g. together with Information Retrieval or Knowledge Management), or may be seen as an approach to learning which is used in another class, or may be addressed as part of a class which focuses on how to teach IL. Different lecturers as well as workshop members argue in favour of one approach or another, but there are successful examples of all these strategies. Decisions on which option is adopted will probably be based on factors such as: the objectives of the whole programme, the length of the programme, the national/institutional context and priorities, the nature of the student body, and the teacher's pedagogic approach and philosophy.

Whatever the model preferred, teaching and learning methods should reflect the essence of IL. It is often said that IL is about learning and learning how to learn; the teaching and learning of IL should reflect this. The teaching of IL should be a model for good teaching practices; to teach IL using a spoon feeding, passive knowledge-transmitting approach is self-contradictory. As IL is all about critical analysis, independent learning, problem-solving, reflective thinking and ethical use of information, an inquiry-driven, knowledge construction approach exposing students to a "deep approach" to learning is the most appropriate.

Annette Skov summarises discussions in the forum and her experiences in teaching IL as a number of guidelines for designing a learning environment for IL that can be derived from these principles:

- It should allow students to be at the centre of the learning process engaging with learning resources in an active and reflective way. The learning environment should provide room for reflection: reflection on IL issues, and self-reflection on learning experiences and progress. Teaching is about getting a "hook" into the individual student's life project; by encouraging reflection, students are asked to consider: is this learning experience important to my life project? What can I learn that will prove useful to me in the future and help me accomplish my goals?

- A number of topics in the IL curriculum lend themselves to active investigation; reading about theories is useful, but being actively involved with theories is even more useful. For instance, the concept of learning styles is usually a topic addressed in IL teaching. Let students work in teams organised according to different learning styles. Kolb's theory on the Experiential Learning Cycle shows that people learn through concrete experience, reflective observation, abstract conceptualisation and active experimentation. Let students be exposed explicitly to this way of planning a learning experience. Schön's "The reflective

practitioner" and "reflection-on-action" can be studied in a textbook, but why not invite reflective practitioners to share their reflections with students?

- Students' past experiences should be recognised and discussed – they have been learners most of their lives, and they bring with them a body of knowledge on their own learning histories that should be drawn upon, discussed and challenged.

- The acquisition of "additional" competences should be encouraged. ICT competences can be enhanced by creating digital portfolios; social and communicative competences by engaging in collaborative work; network competences by taking part in virtual learning environments; and problem solving competences by adopting a problem based learning approach.

- Project work should be concerned with real-life situations and problems. If the objective is to teach students to facilitate learning of information literacy, they should plan a teaching sequence, outlining choice of target group and topic, learning environment, perception of learning, pedagogical and didactic considerations – and actually teach the sequence.

- The lecturer teaching IL should be a designer of the learning environment, a guide on the side, a coach and a motivator, and not a transmitter of knowledge.

An assessment is a necessary element of IL. The assessment practice should be aligned with the pedagogical thinking underpinning the teaching and learning of IL, and appropriate for the learning outcomes that have been set for the assignment or module. Assessments can be formative or summative; as students' reflections on their learning processes are considered important, formative assessment should be used to give feedback to students. A room for reflection can be created quite literally by asking students to create digital portfolios or weblogs to host their assignments and reflections. The summative assessment should assess both the process and the products, i.e. the student's learning process and self-reflection, and the accomplishment of the products in terms of learning outcomes. Critical self-evaluation and self-assessment of performance is an essential quality of the lifelong learner. Unless students are encouraged to take at least some responsibility for their own assessment they are unlikely to reach their full potential as creative, productive learners in the workplace or community. This requires, however, that students are involved in setting and understanding criteria for assessment (Candy et al, 1994).

Topics forming the curriculum for information literacy and learning

The depth of coverage of IL topics will vary depending on the nature of the course. Sheila Webber summarises firstly key topics for IL, and secondly topics concerned with the subject of teaching IL. In doing this she referred to key frameworks for IL drawn up by

professional associations, discussions in the virtual and F-2-F forums, and selected LIS curricula in information literacy and learning.

Curriculum for Information literacy

A number of associations have produced detailed frameworks describing desired characteristics or outcomes for the information literate person. These include the ACRL (Association of College and Research Libraries, 2000) Information Literacy Competency Standards for Higher Education developed in the United States, the Australian and New Zealand Information Literacy Framework (Bundy, 2004) and the Seven Pillars of Information Literacy model produced by the United Kingdom's Society for College, National and University Libraries (SCONUL Task Force on Information Skills, 1999). The ACRL standards have also been translated into other languages (e.g. Homann, 2002) and at time of writing the Information Literacy Section of the International Federation of Library Associations and Institutions (IFLA) was about to publish an international manual for IL. Some of these documents, in particular the ACRL standards go into a good deal of detail about the desired learning outcomes for an information literate person, and that material is not duplicated here. Instead the areas covered by all the key standards are highlighted, as follows.

The LIS student should:

- Be able to recognise when he/she needs information, to identify the nature of the information need, and what the gap is between what he/she knows and what he/she needs.
- Be aware of what different channels and sources are available, be able to identify the appropriate resources for a particular information need, and use these resources effectively to acquire the needed information.
- Be able to evaluate information effectively.
- Be able to manage and apply information.
- Be able to synthesize information and use it to create new knowledge and understanding.
- Be aware of the cultural, ethical, economic, legal, and social issues surrounding the use of information.

Additional important skills, knowledge and attitudes are highlighted in other prominent statements, for example the Prague Declaration (Information Literacy Meeting of Experts, 2003), or were identified as important for LIS students in discussion that took place as part of this project. These skills, knowledge and attitudes are summarised as follows:

The LIS student should:

- Understand key definitions and models of IL, including similarities and differences between them;
- Be aware of different contexts (e.g. social life, workplace, education, private life) for information literacy, and understand the implications for IL in these different contexts;

- Be able to distinguish the relationship of IL with other literacies (e.g. media literacy, IT literacy) and understand the importance of basic literacy skills in underpinning IL;
- Understand the relationship between IL and other LIS skill and knowledge areas (e.g. Knowledge Management, Information Retrieval);
- Understand the research base for IL: understanding key models and theories (e.g. Bruce's (1997) 7 faces model) and being aware of appropriate research approaches;
- Know the functions and scope of key IL organisations and initiatives in the student's country;
- Be aware of the history and origins of IL.

Curriculum for teaching information literacy

Pedagogy and andragogy are significant subjects in their own right, and LIS educators will probably only be able to cover selected aspects, unless pedagogy is a major focus of an LIS programme. LIS educators will also want to refer to educational texts of relevance to specific countries and levels (e.g. Biggs, 2003, would be a good text for educators of UK academic librarians) as well as specialist LIS texts (e.g. Grassian, 2001; Iannuzzi, 1998; Webb and Powys, 2004). The TUNE (Training of Library Users in a New Europe) project identified desirable attitudes and personal competencies for librarians: for example that they should be open-minded, flexible, user-oriented, have social communication abilities and the ability to work collaboratively (TUNE, 2005). These may be seen as desirable qualities for all LIS students, but they are certainly essential for LIS students who are going to teach IL.

The following topics were identified through discussion, and examination of some existing courses and texts.

1. Curriculum design and planning, including:
    - identifying learners' needs;
    - developing appropriate learning outcomes to meet those needs;
    - understanding and applying appropriate modes of assessment;
    - aligning teaching, learning and assessment in course design;
    - understanding appropriate use of technology in designing learning environments;
    - evaluating IL courses and training sessions, including those delivered online.

2. Understanding learners and learning theory, including:
    - learning models and theories, including learning styles, learning strategies and e-learning models;
    - needs and characteristics of particular types of learner e.g. distance learners, e-learners, adult learners, learners with special needs;
    - information behaviour and IL research providing insight into the conceptions or educational needs of learners.

3. Understanding basic concepts, theories and practice of teaching, including:

- conceptions of, and approaches to, teaching;
- teaching methods and tools, including use of technology;
- collaborative teaching, including issues concerning collaboration with specific groups e.g. collaboration between librarians and academics in teaching.

4. Understanding the context for teaching and learning, including:
   - awareness of education policy and practice in specific countries/sectors;
   - the place of learning in a citizen's life, and the concept of lifelong learning;
   - understanding key issues concerned with teaching IL in particular sectors (e.g. schools, higher education, companies, museums, health, public libraries);
   - understanding issues concerned with the teaching and learner support role of the librarian;
   - understanding the role of IL in relation to other library and information services;
   - understanding how LIS professionals can communicate the benefits of IL education to their users.

The Euroguide Competencies and aptitudes for European information professionals (European Council of Information Associations, 2004), does include a section M08: Management of education and training (p56). However, it was agreed by the forum members that this covers only some of the topics listed above, focusing principally on management and delivery issues.

Relationship with other LIS subjects

There are links between Information Literacy and other LIS subjects, most notably with Human Information Behaviour. Some research is important to both areas (e.g. the work of Kuhlthau) and there are common practical outcomes (e.g. effective information searching). This may result in, for example, models of information behaviour being taught in an information literacy class, or elements of both IL and information behaviour being taught in an information retrieval class. There are also links with management and marketing (e.g. in identifying user needs, in managing and planning a service, and in understanding the organisational context and mission). IL has been identified as essential to Knowledge Management (Abel and Oxbrow, 2001) and could be learnt about in that context. Issues to do with lifelong learning and educational policies could be taught in classes concerned with the information society. Additionally, there are some competencies relevant to teaching IL which may be seen as part of a librarian's overall professional competencies e.g. technological competencies; communication skills.

Examples of information literacy practice in LIS curriculum

The participants of the virtual forum described their experiences in the following way; for example, Susie Andretta from the London Metropolitan University, UK notes:

> My experience of IL is that unless it is fully integrated within the LIS curriculum (as a core element at both undergraduate and postgraduate levels) then its impact will not be as

> effective as one would wish. In the School of Information Management at London Metropolitan University we have introduced IL as part of the research methods module (which is a core unit of all our pg courses). IL here is complemented by the action research approach (as these two perspectives promote reiterative and reflective learning) in the module called: Applied Information Research (AIR) where the independent learning competences of IL are fully embedded in a real-world research context. The development of AIR was generated as the result of a consultation exercise with information professionals where a 'can do' attitude was identified as a priority, together with competences in communication and knowledge of sources. We have interpreted a "can do attitude" as the development of an independent learning approach because, in our view, this process necessarily underpins the problem-solving strategies encountered in any information practice.
>
> In my view being information literate is now a necessity for IPs because it helps them maintain a lifelong learning attitude (by embracing the learn-how-to-learn approach) that keeps them abreast of an ever changing information environment, while at the same time it enables them to develop as facilitators of learning to help other users become information literate.
>
> The idea of introducing IL as part of the research competences that Information Professionals (IPs) should develop is fully supported by the literature (Bruce and Moore in particular advocate this) and from experience it has worked well in fostering independent learning attitudes in IPs who attend the AIR module. Not surprisingly, evidence have shown a substantial improvement in students' performance in the dissertation. However, a totally unintentional (but welcome) outcome generated by the IL practice in AIR is the increase in the professional confidence that most of our student (especially those working in public and academic libraries) have experienced as a result of this provision.
>
> Unlike the enthusiastic response that Annette refers to IL in the UK is still not fully acknowledged as a core element of IPs practices. This is why it is so important to ensure that IL is fully integrated in any LIS curricula and Continuing Professional Development policies [forum message, 15/06/05]

Sheila Webber summarises key points about three classes at Sheffield University's Department of Information Studies, UK:

> One class "Information Literacy" is a level 1 semester 1 compulsory component of our BSc Information Management. Key learning outcomes are for the students to analyse their own information behaviour and start to identify ways in which they can become more information literate, to understand some key information literacy models and theories, and to develop some specific skills (e.g. oral presentation skills and searching skills). The main piece of assessed coursework asks the student to reflect on his/her progress in information literacy, presenting relevant evidence, and using the framework of the SCONUL "7 Pillars of Information Literacy." The class involves a large amount of interaction and activity in pairs and groups. In particular, student groups work over several weeks on the solution to a meaningful information problem which they then present orally, and also students pair up to set each other search topics which have to be mindmapped, carried out, documented and presented as evidence for their assessed work. Following on from this class, information literacy is progressed at other points in their degree programme. For example, a level 2 class focuses on Information searching and retrieval, and another class which focuses on

> knowledge management, where the relevance of information literacy to KM and to the learning organisation is explored.
>
> Our postgraduate MA Librarianship students have a compulsory module "Information Resources and Information Literacy" which similarly requires them to reflect on their achievement in information literacy, and also asks them to carry out a search on a specified topic and present a bibliography. Later in the course, as one of their optional classes, they can choose "Educational Informatics". This introduces key pedagogical principles and theories, before focusing on issues and tools to do with the use of technology to support learning, teaching and assessment. Students in this class form groups, each of which designs a WebCT module, and they also produce written documents relating to this task.

Annette Skov from the Royal School of Library and Information Science in Copenhagen, Denmark, describes her IL course:

> Libraries are facing a number of exiting educational and pedagogical challenges; for example, lifelong learning and the information literate citizen in the knowledge society. It is the library sector's job (+) to support these aims via user education from "craddle to grave" in collaboration with other stakeholders.
>
> Teaching has become a professional competence, no matter if one is employed as a childrens' librarian, an academic librarian, or working in the private sector. The objectives of this course is to enable students to plan, design and deliver instruction, both in the physical and in the virtual learning environment. The course has both a theoretical and a practical aim. The point of departure is theories on learning, learning styles and multiple intelligences, focusing on their significance for designing learning environments.

Not all developments have been influenced by IL efforts. For example, in Estonia, the ICT-based education and distance education has directed towards the IL road. For example, Sirje Virkus from the Department of Information Studies of Tallinn University notes:

> …. since 1994 we have started step by step to develop of our students' knowledge, skills and understanding in reflective thinking, critical analysis, problem-solving, learning-to-learn, teamwork, presentation, etc. and we have presented these efforts at conferences and in journals talking about 'new pedagogical models' or the move from 'knowledge transfer model' to 'knowledge construction model' at our department. It meant that we drastically decreased the amount of lectures and focused more on team-projects requiring problem solving and on reflective seminars in all areas of curriculum to develop complex cognitive skills and social competences of our students. However, these ideas derived not from IL efforts, but rather from educational theories and collaboration with high level DE centres and institutions (for example, Pennsylvania State University, University of New Brunswick, the Dutch Open University, EADTU) and experts (for example, Michael Moore, Elizabeth Burge, Martin Valcke, Rob Koper, etc.) when the Department started to develop its DE programmes based on modern ICT.
>
> Thus, being influenced by constructivist and reflective thinking (Jonassen, Schön, etc.) and alternative modes of educational delivery we started to rethink our curriculum, our pedagogical or didactic models but we didn't think then in terms of IL. We started close cooperation with the department of educational sciences and computer sciences in

> developing joint project proposals and arranging joint research seminars and it influenced our thinking as well. Thus, I should confess that focus on distance learning and virtual learning environments influenced our understanding of new ways of curriculum design. Our own university supported this approach, finding that products like WebCT or Blackboard has no constructivist logic built in and our Educational Technology Centre developed learning management system IVA based on open source and derived from the so called 'three Cs model' of Jonassen (Context, Collaboration, Construction) that fosters the constructive way of learning and teaching. Andragogy (taught by the Chair of Andragogy within the Department of Educational Sciences) and user education have been in our LIS curriculum more than 15 years.
>
> Thus, now we can talk about the following aims of our curriculum:
> a) to foster graduates to achieve qualifications and competencies needed for work in information sector;
> b) to foster our students to become information literate and to undertake research;
> c) to foster the development of knowledge, skills and attitudes needed for facilitating IL [forum message, 20/06/05]

It should be also noted that there are several other examples of IL practice even those were not described very precisely in the virtual forum. For example "Information Literacy Instruction: Theory and Practice" class is offered at University College Dublin. Claire McGuinness notes:

> "This course aims to introduce students to the theoretical foundations of pedagogy, and to explore with them, the various instructional options that are available to the "teaching librarian" in the modern context. Students will learn about the planning, design, delivery and assessment of information literacy instructional programmes, with the aim of preparing them for the type of teaching work they may undertake as part of their jobs."

Communication and networks for LIS educators in this domain

It should be noted that there is no European or international organization, institution or association for LIS educators whose main concern is IL within the LIS curriculum. However, many organizations, networks and associations at a global, regional and national level have promoted the issue of IL and made an invaluable contribution, both to thinking about IL and to the development of LIS curricula with an IL component. Communication and networking is also supported by many international projects, conferences and discussion lists. Thus, LIS educators in Europe have been active in IL initiatives in Europe as well as internationally (Virkus, 2003).

Perhaps, the best-known intergovernmental organization that has started the promotion of IL in the context of its Information for All Programme (IFAP) is the United Nations Educational, Scientific and Cultural Organization (UNESCO). During the 8th meeting of the Bureau of the Intergovernmental Council for the Information for All Programme, at UNESCO Headquarters in Paris, a Thematic Debate on Information Literacy took place on 5 April 2005. The purpose of the debate was to identify the particular contribution that IFAP could make to give all people the opportunity to become information literate. With

the support of UNESCO several major IL initiatives have been arranged; for example, the Information Literacy Meeting of Experts in Prague in September 2003, UNESCO was also a co-sponsor of an international leadership colloquium on IL, which was held in Alexandria, Egypt, November 6–9, 2005.

UNESCO's main strategy in the area of IL consists of awareness-raising about the importance of IL at all levels of the education process – basic education, primary and secondary education, technical and vocational training and lifelong education – and of establishing guidelines for integrating IL issues in curricula. A particular focus will be on training teachers to sensitize them to the importance of IL in the education process to enable them to incorporate IL into their teaching and to provide them with appropriate pedagogical methods and curricula. European LIS educators have been invited as major experts to the meetings in Prague and in Paris.
The International Federation of Library Associations and Institutions (IFLA) focused its concerns regarding the teaching of IL through the establishment of a Roundtable on User Education in 1993. At their meeting during the IFLA Boston conference in August 2002, the Round Table changed its name to the Information Literacy Section. The primary purpose of the IL Section is to foster international cooperation in the development of IL education in all types of libraries. The Section focuses on all aspects of IL including user education, learning styles, the use of computers and media in teaching and learning, networked resources, partnerships with teaching faculty in the development of instructional programmes, distance education, and the training of librarians in teaching information and technical skills. It is the mission of the Section to disseminate information on IL programmes and trends and work closely with other IFLA bodies and other organizations in the development of programmes, workshops and projects related to IL education. Again, European LIS educators participate actively in this section.
There are also some international associations with IL interests groups (for example, International Association of School Librarianship (IASL)
Information Literacy Special Interest Group) but European LIS educators are not actively involved in those groups. Upon a recommendation from the Prague Meeting of Information Literacy Experts several organizations (e.g. Australian and New Zealand Institute for Information Literacy (ANZIIL), US National Forum on Information Literacy, NORDINFOlit, SCONUL Working Group on Information Literacy, etc.) are committing to creating an International Alliance for Information Literacy. The evolving purpose for the Alliance is to facilitate the sharing of information and expertise on IL across regions and nations of the world. The Alliance will consist of organizations that act as nodes around the world (National Forum on Information Literacy, 2005).

Professional organizations and associations in a number of countries or representing specific regions of the world have promoted the importance of IL. For example, in the USA, Australia and New Zealand professional associations have made an invaluable contribution to thinking about IL and contributed towards IL practice and developed standards and recommendations that have been influential both nationally and internationally. In Europe, the European Union has taken various initiatives supporting networking and communication in the IL area, though the lack of coherent and long-term policy is clear. For example, several IL projects with the involvement of European LIS

educators have been funded by the EC – EDUCATE, DEDICATE, LOCOMOTIVE, DELCIS, etc. (Virkus, 2003).

There are also various IL initiatives in Europe where LIS educators are participating; for example, European Network for Information Literacy (ENIL) - a network of researchers focused on creating a common research agenda and exchanging best practices on IL; the European Network for School Libraries and Information Literacy (ENSIL); Library and Learning Support Working Group (LLSWG) of European Association of Distance Teaching Universities (EADTU) – a network for exchanging best practice and facilitating IL in European ODL institutions, the Nordic Forum for Information Literacy (NORDINFOlit) - a cooperative initiative of Nordic countries in the field of IL (Virkus, 2003).

At national level professional institutions and organizations in several countries have included IL in their agenda. For example, in UK, the Society of College, National and University Libraries (SCONUL) and the Chartered Institute of Library and Information Professionals (CILIP) have been the main promoters.

Several organizations and interest groups in Sweden work on and discuss the subject, for example Svensk Biblioteksförening with a special group for pedagogical issues at the library. In Denmark a number of special interest groups focus on IL. In the Netherlands, for example, LWSVO (National Workgroup of School Librarians in Secondary Education) assists school librarians in implementation of new developments in the school and school library. In Spain a working group on IL issues was set up in Cataluña under the name ALFINCAT. It includes a wide membership from other regions to exchange ideas, approaches and good practice, and the advancement and promotion of the IL agenda (Virkus, 2003). These are just few examples of national IL activities where LIS educators have been involved. The main activities of national institutions and organizations have been to arrange conferences and seminars, to share experiences and to facilitate thinking about IL among professionals.

Professional associations of LIS educators such as the European Association for Library and Information Education and Research (EUCLID) have recently started to pay more attention to IL issues as well. IL and learning is regarded as one main interest area within the LIS curriculum in the framework of the project "LIS Education in Europe: Joint Curriculum Development and Bologna Perspectives". However, it should be also noted that even the Bologna process has influenced several structural changes in European LIS education and also supported many earlier developments, its influence on the development of IL has not been significant.

Research agenda for information literacy and LIS curriculum

Several institutions, organizations (ACRL, 1980, 2000) and researchers (Bruce, 1997, Breivik, 2000) have proposed a research agenda for IL. For example, the ACRL Instruction Section (IS) Research and Scholarship Committee updated the document (the

Research Agenda for Bibliographic Instruction by the ACRL Bibliographic Instruction Section (BIS) Research Committee, published in 1980) in 2000 and identified important research areas relevant to library instruction programmes in the current environment including IL. The Research Agenda for Library Instruction and Information Literacy was organized into four main sections: Learners, Teaching, Organizational Context, and Assessment. Each section poses general questions with the goal of encouraging those interested - practitioners, researchers, and students alike - to conduct research around these important areas.

Breivik (2000, p. xi-xii) identified a number of key issues that must be addressed if IL efforts are to be more effective and more extensive in the future. There was no evidence of mapping the research needed in the area of IL and LIS curriculum. However, the general areas reflected in the ACRL Agenda, as well as those identified by IL researchers, are also relevant to the LIS education domain. For example, to mention only a few:

- investigating the effectiveness of different methods of instruction for addressing various learning styles;
- understanding the impact of the Internet, as a teaching tool, on learning styles, and the implications for IL;
- investigating whether the structure and delivery of instruction differ when organized according to goals or concepts such as lifelong learning, subject-based teaching, course-integrated instruction, course-related instruction, or credit-bearing library courses;
- exploring how an institution can ensure that librarians participating in IL efforts have the knowledge and skills to make the programme successful.

Thus, research into IL, and research in the educational domain in general, have a great impact on how we integrate/embed IL into LIS curriculum and facilitate both our LIS students' own learning in information literacy and these students' learning of how to facilitate others' information literacy.

Conclusions and recommendations

The following conclusions emerged from the discussion by some 18 participants:

- The working definition of IL in the framework of the LIS curriculum should be broad, and can be seen as an umbrella definition that includes many other literacies and implies business as well as private life in the context of lifelong independent and flexible learning.
- A broad definition of IL from the Prague Declaration, the CILIP, the ALA, Webber and Johnston or Boekhorst was the most useful in general and as a working definition for the forum.
- IL is absolutely critical literacy to all sectors of society that enables people to cope successfully in their professional and personal lives and benefit from the knowledge society.

- IL is an ongoing process that should be facilitated throughout a whole life. Becoming information literate should start at home, continue at primary school and be a part of formal training in all phases and all subject areas during the whole education process as a preparation for lifelong learning.
- Library and information professionals have a special role in the process in which people become information literate. Thus, they have to learn to do this effectively.
- It is essential for LIS students: (a) to be aware of IL as a concept (b) to become information literate themselves (c) to learn about some key aspects of teaching IL.
- IL itself may be taught in different ways: through a separate class, or may be covered explicitly in one or more other LIS classes, or may be seen as an approach to learning which is used in another class, or may be addressed as part of a class which focuses on how to teach IL.
- Decisions on which option is adopted will be based on factors such as: the objectives of the whole programme, the length of the programme, the national/institutional context and priorities, the nature of the student body, and the teacher's pedagogic approach and philosophy.
- Whatever the model preferred, the essence of IL and constructivist approaches to learning and teaching should be reflected.
- The depth of coverage of IL topics will vary depending on the nature of the course. However, key topics for IL can de defined.
- There are no European or international organizations, institutions or associations for LIS educators which main concern is IL within the LIS curriculum. However, many organizations, networks and associations at global, regional and national level have promoted the issue of IL and made an invaluable contribution to thinking about IL as well as the development of LIS curriculum with IL component and European LIS educators have been active in those.
- Research into IL, and in the educational domain in general, have a great impact on how we integrate/embed IL into LIS curriculum and facilitate both our LIS students' own learning in information literacy and these students' learning of how to facilitate others' information literacy. However, the research agenda for IL and LIS curriculum still needs to be developed.

The following recommendations emerged:

- Promote and share experiences of good practice that stimulate LIS schools to integrate or embed IL into the LIS curriculum.
- Encourage collaboration amongst LIS educators to ensure IL is appropriately recognized as an essential element within the LIS curriculum
- Encourage coordination and collaboration with relevant international organizations, institutions or associations which concern is IL to avoid duplications and to create synergy.

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ANZIIL: http://www.anziil.org/
CILIP CSG IL Group:
http://www.cilip.org.uk/specialinterestgroups/bysubject/informationliteracy
ENIL: http://www.ceris.cnr.it/Basili/EnIL/index.html
ENSIL: http://vs.eun.org/eun.org2/eun/en/vs-Library_vs/sub_area.cfm?sa=3937&row=1
IFLA Information Literacy Section: http://www.ifla.org/VII/s42/index.htm
NORDINFOlit: http://www.nordinfolit.org/
SCONUL WGIL: http://www.sconul.ac.uk/activities/inf_lit/
Svensk Biblioteksförenings specialgrupp för bibliotekspedagogik:
http://www.biblioteksforeningen.org/

APPENDIX, Participants of the workshops "Information Literacy and Learning"

Leader of the Workshops
Sirje Virkus, Department of Information Studies, Tallinn University, Estonia, sirvir@tpu.ee

Experts of the Workshop Group
Albert K. Boekhorst, University of Amsterdam, The Netherlands; University of Pretoria, South Africa, A.K.Boekhorst@uva.nl
José A. Gomez-Hernandez, Library and Information Science Department, Faculty of Information and Communication Studies, University of Murcia, Murcia, Spain jgomez@um.es
Annette Skov, Royal School of Library and Information Science, Copenhagen, Denmark, AS@db.dk
Sheila Webber, Department of Information Studies, Sheffield University, United Kingdom, s.webber@sheffield.ac.uk

Experts of the Virtual Workshop Group

Susie Andretta, Information Management School, London Metropolitan University, United Kingdom, s.andretta@londonmet.ac.uk
David Bawden, Department of Information Science, City University London, United Kingdom, db@soi.city.ac.uk
Sylvie Chevillotte, ENSSIB (Ecole Nationale Supérieure des Sciences de líInformation et des Bibliothèques), Villeurbanne, France, chevillo@enssib.fr
Bill Johnston, Centre for Academic Practice, the University of Strathclyde, United Kingdom, B.Johnston@strath.ac.uk
Claire McGuinness, University College Dublin, Republic of Ireland, claire.mcguinness@ucd.ie
Eva Ortoll Espinet, Universitat Oberta de Catalunya, IN3, Barcelona, Spain, eortoll@uoc.edu
Cristóbal Pasadas Ureña, Faculty of Psychology, University of Granada, Granada, Spain, cpasadas@ugr.es
Margarita Perez-Pulido, Department of Informatics, University of Extremadura, Badajoz, Spain, marga@alcazaba.unex.es
Bernard Pochet, Gembloux Agricultural University, Belgium, Pochet.B@fsagx.ac.be
Giovanni Solimine, Viterbo University, Viterbo, Italy, solimine@unitus.it
Tibor Koltay, Department of Information and Library Studies, Szent István University Jászberényi College; Department of Library and Information Science Berzsenyi Dániel College, Hungary, Koltay.Tibor@jfk.szie.hu
Paul Thirion, Faculty of Psychology and Education Science of the University of Liège, Belgium, paul.thirion@ulg.ac.be

4 Information Seeking and Information Retrieval

Jessica Bates
David Bawden
Ines Cordeiro
Jela Steinerova
Pertti Vakkari
Polona Vilar

Summary and abbreviations and acronyms used

This chapter deals with the part of the library and information science (LIS) curriculum involving Information Seeking and Information Retrieval (IS&R). This is a very wide theme; so wide that no attempt can be made to specify a single curriculum.

This theme has three main aspects, distinct though inter-related:

- Human Information Behaviour
- Information Seeking
- Information Retrieval

and three perspectives by which it may be presented:

- human- or user-centred
- culture-centred
- system-centred

The curriculum for this theme acts as a clear and important mediator between research and practice.

IS&R is an important core of the LIS discipline; arguably - together with knowledge organisation (KO) - the central core. It should be included in any LIS course, at any level. It has relations with several other themes within the discipline, particularly with KO and with Information Literacy and Learning. It is clearly an important 'European theme', and a crucial part of any European LIS curriculum, though there are no uniquely 'European values' associated with it. Variations in practice, resources and perception in different parts of Europe may well influence curriculum content and development. This is likely to be largely in the nature of the exemplification of contents and principles, with local examples used for illustration.

There are numerous concepts, models and frameworks for the whole IS&R area, and these may be used as the basis for the organisation of a curriculum. The core of the analysis of this chapter is the presentation and discussion of set of 28 topics, covering the

whole theme, from which courses at a variety of levels (Batchelor, Master, or professional development), depth, and subject focus may be constructed.

Ethical and IT issues are embedded within these topics, rather than being treated as topics in their own right. IS&R's relation to multiculturalism and children's culture is expressed through examples of empirical studies, service provision etc. A focus on principles and concepts allows inclusion of libraries, archives, museums and other 'spaces' in which IS&R is supported.

Abbreviations and acronyms used

CLIR	Cross-Language Information Retrieval
CPD	Continuing Professional Development
EU	European Union
HCI	Human Computer Interaction
HIB	Human Information Behaviour
ILL	Information Literacy and Learning
IS	Information Seeking
IR	Information Retrieval
IS&R	Information Seeking and Information Retrieval
ICT	Information and Communication Technologies
IT	Information Technologies
KO	Knowledge Organisation
LIS	Library and Information Science
LIS-EU	LIS Education in Europe: joint curriculum development and Bologna preparation project
OPAC	Online Public Access Catalogue
TREC	Text Retrieval Conference

Note on terminology in this chapter

The terms *theme*, *aspect*, *perspective* and *topic* are used as follows throughout the chapter:

Theme
Information seeking and retrieval, the whole of the subject matter to which this chapter is devoted

Aspects
the three 'meta-topics' within the theme: human information behaviour, information seeking, and information retrieval

Perspectives
The three 'paradigms' through which the theme may be approached: human/user, system, and cultural

Topics
The twenty eight detailed 'subject chunks' into which the theme has been divided

Introduction

Chapter overview

Initially, the process by which this chapter was written is described, and the participants identified.

The three aspects of the theme - HIB, IS and IR - are then introduced and explained, and their inter-relations set out. Three perspectives, centred on the humans/users, on the cultural setting, and on systems, are introduced, and the relations between curriculum, research and practice for this theme are explained.

The place of IS&R within the LIS discipline, and its relations with other themes, is outlined. Its status as a core part of any LIS curriculum is justified.

The European dimension of IS&R is examined, with respect to its status as a 'European theme', and as part of a core European LIS curriculum, and to differences in its treatment in different regions of Europe.

Core concepts and models within IS&R are introduced, without being described in detail. A set of 28 topics, covering the whole theme and forming a superset from which any course in the area could be constructed, is presented and discussed.

Five cross-disciplinary issues are discussed with respect to IS&R: multiculturalism; ethics; IT; the relations between libraries, archives and museums; and children and children's culture.

There follows a brief concluding section, and a short list of references.

Process

The chapter was written in the final stage of a four stage process.

The first two stages were carried out virtually, between January and July 2005. The scope of the topic was discussed, and an initial list of topics within it were enumerated, largely through email communication. The list of topics was refined, and other issues discussed, using the SiteScape discussion forum.

The third stage was carried out face-to-face, in working sessions at the Copenhagen workshop in August 2005, during which remaining issues were clarified and elaborated, and a draft of the chapter was produced.

In the fourth stage, the final text of the chapter was derived by email exchange.

Participants

The workgroup leader was David Bawden (United Kingdom).

Members of the core group during the preparation and virtual group stage were:
David Bawden, Ines Cordeiro (Portugal), Pertti Vakkari (Finland), Polona Vilar (Slovenia)

Group members taking part in the Copenhagen workshop were:
Jessica Bates (Ireland), David Bawden, Jela Steinerova (Slovakia), Polona Vilar

Additional input was provided by Peter Ingwersen (Denmark), Philip Hider (Australia) and Carol Kuhlthau (USA) [in the virtual group stage] and by Birger Hjørland (Denmark) [at the Copenhagen workshop].

Introduction to the theme: 'Information Seeking and Information Retrieval'

This theme, as given, is large and extensive. Nonetheless, the working group decided that, in order to gain a coherent and comprehensive treatment, suitable as a basis for all courses covering any aspect of this topic, it would have to be extended further, to include the still broader topic of human information behaviour. This is justifiable, not merely because it is necessary in order to present a reasoned and logical curriculum, but also because of the increasing tendency to integrate information behaviour with the other two concepts, in research and scholarship: see, for example, Vakkari (1999), Pharo (2004), Spink (2004), Spink and Cole (2005), Steinerova and Šušol (2005), Ingwersen and Järvelin (2004, 2005), and Kuhlthau (2005).

Broadening the topic in this way puts a strong constraint on the sort of analysis of the curriculum which can be carried out in practice. It is not possible to specify a single curriculum for any particular course covering such a wide area. Rather, we have sought to enumerate a list of topics from which such a course may be constructed, and to analyse and present the paradigms, perspectives and relationships which may be applied in order to carry out the construction of a coherent and rational curriculum.

This is an area in which there is already a significant number of published models, frameworks and conceptual analyses; for reviews, see Wilson (1999), Case (2002), Pettigrew, Fidel and Bruce (2001), and Järvelin and Wilson (2003). We have felt it important to use these whenever possible, rather than to create our own.

It is surprising difficult to find clear and explicit definitions and explanations of the three aspects of IS&R. We have used the following working definitions for this report:

Human Information Behaviour: *All aspects of behaviour with respect to interaction with, and use of, all forms of information and knowledge, through all sources, channels and media, including informal and unrecorded communication*
['human' is specified here, and not for IS and IR, since there is evidence that other species exhibit information behaviour, whereas the seeking and retrieving of information seems to be - in the current absence of evidence for either extraterrestrial civilisations or genuinely intelligent machines - a purely human attribute. The term is now widely used in the literature, particularly in the USA]

Information Seeking: *An aspect of HIB, the purposeful activities of looking for information to meet a need, solve a problem, or increase understanding.*

Information Retrieval: *An aspect of IS, the purposeful searching for information in a system, of whatever kind, in which information - whether in the form of documents, or their surrogates, or factual material ('information itself'), are stored and represented.*

The definitions of HIB and IS are largely drawn from JESSE (1999) and Wilson (2000), that of IR from Sparck Jones and Willett (1997).

Relationships between HIB, IS & IR

For the purposes of this chapter, we take the relationships between the three aspects of IS&R to be that illustrated in Wilson's nested model (1999). The widest outermost layer is human information behaviour. Within this, as a subset of information behaviour is information seeking. Within this, the innermost layer, is information retrieval, a specific form of information seeking.

Neither of the two inner layers can be understood without some appreciation of the layer outside them. This is the justification for introducing HIB into the IS&R theme. It is also true that HIB itself cannot be fully understood without some appreciation of the wider contexts of human behaviour, but these are outside the scope of this chapter.

Perspectives on IS&R

Three distinct perspectives may be used to analyse and understand IS&R. They are not mutually exclusive, but rather give complementary insights. It is desirable that students are exposed to all three, although any particular course in the IS&R theme may relate mainly to one of them. They are:

- human- or user-centred
  this focuses on the information needs and behaviour of individuals, emphasising studies of individual behaviour
- culture-centred
  this focuses on information seeking as an aspect of human culture, emphasising the ways in which information behaviour stems from, and contributes to, cultural groups, and is itself affected by social and organisational structures

- system-centred
  this focuses on retrieval systems, emphasising system design and the evaluation of the effectiveness of system performance

In all of these perspectives, even when the focus may be on systems, the emphasis - distinguishing an LIS approach from an IT or information systems approach should be on *content*, and on the information needs and use which require content, and on *context*, which determines how and why the systems are used, and which itself has several dimensions (Spink 2002).

Curriculum, research and practice for IS&R

The IS&R curriculum, as we envisage it, both draws from, and feeds into, both research and practice.

Research findings influence the curriculum, as a source of new conceptual insights, and of new empirical studies to serve as examples. Conversely, the curriculum may influence research, in that scholarly analysis for curriculum development, or the experience of teaching itself, may suggest new ideas for research.

Practice influences the curriculum, by indicating the skills and knowledge needed in the workplace, and by providing practical experience and example. The curriculum in turn influences practice, as freshly qualified, or retrained, staff bring new insights and ideas to the workplace.

This last is likely to be an important means by which research influences practice. While practitioners may read the research literature, and attend conferences, it is more likely that the influence will be less direct and more long-term, with the curriculum - especially if it is used for CPD as well as for formal education - acting as a mediator.

The place of IS&R in the LIS Discipline & Curriculum

IS&R in the LIS discipline

This theme is one of the fundamental cores of the discipline, so that it is difficult to imagine any LIS programme without some element of IS&R.

It may be argued that IS&R is *the* core of LIS, if we accept that the main purpose of LIS practitioners - and the only rationale for the existence of the LIS profession and discipline - is to provide access to meaningful recorded information through a variety of channels. In order to provide such access, it is necessary to know what information is needed by various groups and communities, how such information is sought, evaluated and used, what kind of tools are needed for retrieval, how information can best be structured and indexed to meet these needs, and so on. These are the essential components of IS&R (and to some extent of KO), and hence the position of the theme as core can be justified.

Bearing in mind the breadth of the IS&R theme, particularly with HIB included, there is scope for different views as to what is central to the discipline, and what importance is placed on different aspects, perspectives and topics. This will impact on the curriculum, as is discussed below.

The strongest links between this theme and the other themes within LIS are with the areas of Information Literacy and Learning and of Knowledge Organisation. KO shows how information is organised, so that it may be sought and retrieved effectively. ILL is largely based around ideas of competence in information seeking and use.

The following themes are also cognate topics: Cultural Heritage and Digitisation of the Cultural Heritage, Knowledge Management, Library Management, and Information Society. These are all themes which build on the ideas of HIB, IS and IR, in showing how information can be managed, accessed and used in organisation and in society.

Library and Information History is also a cognate theme. A historical perspective can provide an understanding of how and why IR systems have developed as they have, and how HIB and IS have been understood, and have changed their nature, over time.

IS&R seems, therefore, to be a central theme within the LIS universe.

IS&R in the LIS curriculum

Given what has been said above, it is clear that our view is that some aspects of IS&R should be in the core of all LIS programmes. Indeed, they have also have a place in programmes other than those intended to prepare students for careers as LIS practitioners. It is no surprise that the survey carried out as part of the LIS-EU project found this theme represented in every one of the programmes for which information was available; the only theme to have 100% representation. There is a substantial literature dealing with the ways in which these subjects are taught; for recent examples, see Diaz, Hanlon and Monoi (2005), Haltunen and Järvelin (2005), and Nicholson (2005)

It will be clear from what has been said above, that, given the breadth and scope of the IS&R theme, particularly with HIB included, there will inevitably, and rightly, be differences between schools, programmes, and levels in terms of what is taught, and of what emphasis is given to different topics, examples and perspectives.

We consider that, wherever possible, all courses should give students an understanding of all three perspectives noted above: the human-, system- and culture-centred. There will necessarily be different emphases - expressed as variation in depth, level and focus of treatment - from school to school, and indeed from programme to programme in each school, as to what is covered in the core. There is certainly also scope for optional courses dealing with specialised or advanced aspects of the theme.

There is a very strong overlap, as noted above, between this theme and knowledge organisation. Both would be expected to feature in the core of any LIS programme. If KO does not have a place of its own, then it would be appropriate to include it together with

HIB/IS/IR as a single core component, in view of the centrality and significance of KO (Hjørland 2003).

The European Dimension

A European theme?

It will be clear from what has been written above that the IS&R theme is an important one for LIS education within the EU. This is not because it is a theme specifically relevant to the EU and not to other parts of the world. On the contrary, we see little difference in the significance of IS&R within Europe, and the way it should be presented in educational programmes, to that which would apply anywhere else in the world. Such differences as there may be are greatly outweighed by the other perspectives through which IS&R may be viewed, for example the human/system/cultural perspectives.

It is not, in our view, possible to identify any particularly European values within this theme. Some values and approaches which may be thought of as 'European', for example a social rather than commercial approach to information provision, may be found in other parts of the world.

The one aspect of the theme which can be identified as particularly, though not uniquely, important for Europe is the multilingual systems / CLIR topic.

Part of the European LIS core curriculum?

IS&R should certainly be part of any LIS curriculum within the EU; not because it is of specific importance in a European context, but because - for the reasons given above - it should form a part of the core of any LIS programme.

Differences within Europe?

There are certainly differences in professional practice across Europe, in respect of aspects of IS&R. These may stem from historically different traditions, or from pragmatic and technical considerations, such as local interpretations of cataloguing rules. There are also local differences in the way in which IS&R is currently taught, and the topics which are covered; these differences are usually pragmatic and economic, rather than philosophical or pedagogical, in nature.

We do not consider that these differences should affect the IS&R curriculum greatly. The same principles and perspectives are applicable in all regions, should be taught everywhere. Examples and case studies, however, should be drawn from the local context, but with clear 'signalling' of how they compare with practice elsewhere in Europe, and indeed in the world.

Core concepts, models and topics

In this section, the core concepts and models of IS&R are outlined, and a list of topics, from which curricula may be constructed, is given.

Core concepts of IS&R

It is not our intention here to define and explain the core concepts of IS&R; apart from space limitations, there are divergent views as to the best way of understanding these concepts, which it is not our task to debate (see Case 2002, for a thoughtful discussion of several of these concepts). Rather, we list these concepts, simply as a means of delineating the theme. Any curriculum development based on the topics below will rely on a clear understanding of these concepts, and their relationships, together with an appreciation of the three perspectives outlined above.

These core concepts are:

- human information behaviour; information seeking; information retrieval [*working definitions of these three key concepts have been given above*]
- knowledge; information; document; resource; retrieval system
- information need; information access; information use; becoming informed; information literacy
- relevance; utility; satisfaction; evaluation of information
- content; context
- knowledge organisation; indexing; vocabulary; information representation

Models for IS&R

There are numerous relevant models representing aspects of the IS&R theme, and these will not be discussed here: see Wilson (1999), Case (2002), Pettigrew, Fidel and Bruce (2001), and Järvelin and Wilson (2003). We make the point, however, that use of such models will play a vital part in bringing coherence to the teaching of the complex area of IS&R. The most appropriate models to use will depend on the topics being covered, and on the level and depth of the treatment. The models may be divided into four groups, which are named and exemplified below, and it is desirable that students be introduced to examples of all four kinds.

Broad frameworks for understanding IS&R
    e.g. Järvelin and Ingwersen, Wilson 1981
Conceptual models of IS
    e.g. Wilson 1996, Dervin
Models of the search process
    e.g. Bates, Kuhlthau, Marchionini, Vakkari, Ellis, Foster, Spink, Saracevic, Ingwersen, Pharo
Models of the retrieval process
    e.g. Boolean, best match, Bayesian

List of topics for IS&R

The 28 topics listed below are the result of our attempt to divide the very broad theme of HIB, IS and IR into coherent and discrete chunks. They are intended to serve as a basis for discussing curriculum, content, teaching methods etc. This is a pragmatic listing of topics, without theoretical justification, and based on personal knowledge of current practice and curricula, though influenced by the arrangement of material in Case (2002).

The topics do not necessarily have equal weight, in the sense that some could generate more teaching material than others. Similarly, they could be used as the basis for courses at very different depth and level. All are suitable as a basis for courses at both Batchelor's and Master's level, and could be used for in-service training, professional updating and CPD.

The topics may be used to form curricula at very different levels of granularity. At one extreme, an overview course for the whole IS&R theme could be constructed by giving each topic one hour's presentation time, in a course of, for example, 10 sessions of 3 hours each. Conversely, if each topic were allowed 3 hours presentation, a course of the same duration would encompass 10 topics. This list of topics does not prescribe any extent of content.

Each topic is noted as HIB, IS or IR, depending on which aspect of IS&R it focuses on, or as Gen(eral) if it deals with all three. The numbers of topics in each category - general 2, HIB 8, IS 6, IR 12 - indicates a reasonable balance between the aspects of the themes, bearing in mind that the divisions are not exact, and that (as stated above) the topics do not correspond to equal amounts of 'teachable material'.

Topics 1 and 28, the two general topics, deal with basic concepts within IS&R, essentially as introduction and conclusion. Topics 2,3,4 and 11,16,27 fulfil the same function for the three components: HIB, IS and IR. We envisage that any practical curriculum - other than for an advanced and specialist course - would include topics 1 and 28, at least one of 2, 3 and 4, and at least one of 11, 16, and 27.

Topic 1 includes the fundamental perspectives, concepts, frameworks and research approaches of the whole theme, and may be used to show where the subject matter of any particular course is situated within the larger whole. The overview topics (2, 3 and 4) introduce in more detail the main concepts, models, theories and research methods for each of the three aspects. They also introduce a historical dimension, but - for reasons noted later in this chapter - do not explicitly include ICTs, which are 'embedded' in following topics, as are ethical issues. They also introduce examples, so as to bring a sense of actuality to the theoretical underpinnings.

Topics 11, 16 and 27 provide a conclusion to the treatment of the three aspects. For HIB (11) this involves a consideration of the role of the information professional in influencing HIB, and promoting information literacy. For IS (16) and IR (27), respectively, there is a focus on the use of research evidence in developing person-centred information services, and in designing effective retrieval systems.

The overall conclusion (topic 27) deals with new developments and 'hot topics', and could also be used to focus on issues of current local interest. It emphasises the use of research findings in developing evidence-based practice.

The remaining topics in each of the three aspects are chosen pragmatically. For HIB and for IS, the division of the aspect roughly follows the typology of Case (2002). The IR aspect has more topics assigned to it; this simply reflects the natural way in which this aspect is segmented, and does not imply that greater importance is attached to it. Two of the IR topics are very broad - 20 for specialised retrieval systems, and 24 for the linguistic aspects of IR - it is likely that, in any course, these would either expend to several sessions, or would be represented by a single example.

Two topics - 9 for information literacy and 25 for knowledge organisation - cover material dealt with by other workgroups. They are included here, as noted above, so that in a programme which did not include this material elsewhere, there would be some coverage of these important issues.

IS&R topics

1 Basic concepts and relationships
Gen Relationships between HIB, IS, IR
Three perspectives: human/user, culture, system
Concepts: information and knowledge; documents; typology of information resources
Relevant research methodologies; laboratory, operational, qualitative, quantitative

2 Overview of HIB
HIB Frameworks, concepts, models, theories
Research approaches and methods
Example topics
Historical development of studies

3 Overview of IS
IS Frameworks, concepts, models, theories
Research approaches and methods
Example topics
Historical development of studies

4 Overview of IR
IR Frameworks, concepts, models, theories
Components of retrieval systems
Research approaches and methods
Example topics
Historical development of studies

5 Human information behaviour: people
HIB Individuals and groups
Occupation, age, activity, etc.
Characteristics: cognitive, social, cultural, organisational

6 Human information behaviour: sources and places
HIB Channels and media
Print, electronic, formal , informal, mass, local, ICTs
Places & spaces – libraries, information centres, archives, museums, information grounds (IBEC 2005)

7 Human information behaviour: patterns of behaviour
HIB Browsing, encountering, avoidance, anxiety, advantages of lack of information, overload
Innovation and creativity

8 Information needs; nature and typology
HIB identifying information needs; users and non-users

9 Information literacy
HIB place of seeking/retrieval in wider context
teaching and supporting users to retrieve

10 Organising and using information
HIB

11 Role of information professionals
HIB

12 Information seeking in context
IS Occupational, professional, everyday life, etc.

13 Information seeking in specific domains (subjects)
IS relation to domain analysis
domain specific resources

14 Strategies and tactics for information seeking
IS Task-based and cognitive etc.

15 Relevance and satisfaction
IS concepts, typology, history, empirical studies

16 Person-centred information services
IS Developing services around needs, using research findings

17 Historical development of IR systems

IR associated IT: retrieval in different media - print, digital, network

18 Retrieval interfaces
IR HCI, usability testing, personalisation.
Machine interfaces and interoperability, visualisation

19 Typology of retrieval systems
IR dbms, factual/numeric systems
bibliographic databases, full-text retrieval, e-journals, content management systems
OPACS, digital library, managing digital resources
Internet search engines, subject gateways, 'hidden web', semantic web
Enterprise and knowledge management systems (Autonomy, Verity, Google, etc.)

20 Specialised retrieval
IR e.g. multimedia, images, audio, sounds, music, fiction, chemical structure, genome and protein sequence

21 Intelligent systems and techniques; cognitive aspects
IR intelligent agents, AI
data / text mining
question-answering systems, recommender systems
Cyc

22 Retrieval tactics
IR General and specific

23 Citation searching, bibliometrics. webliometrics
IR

24 Retrieval language
IR Natural language processing, automatic indexing, classification, summarisation
Multilingual systems, CLIR

25 Metadata and controlled vocabularies
IR Controlled vocabularies in retrieval
ontologies, subject headings, thesauri, taxonomies, classifications, RDF, topic maps, concept retrieval / topic retrieval / latent semantic retrieval
Metadata and retrieval
intellectual metadata creation: cataloguing, indexing, abstracting
format and content standards

26 Evaluation of systems and services
IR IR system evaluation: TREC, metrics and other performance measures
User-oriented evaluation of information seeking and searching

27 System design based on research findings
IR

28 New developments and future trends in HIB, IS and IR
Gen Current research topics
Evaluating research, evidence-based practice

Cross-Disciplinary Themes

There are five cross-disciplinary themes to consider: multiculturalism; ethics; IT; relations between libraries, archives, museums; and children and children's culture.

Multiculturalism

There is no defined place for treatment of issues associated with multiculturalism in the IS&R curriculum. Rather the theme should appear naturally in appropriate topics. Examples would be: coverage of empirical studies of the information seeking behaviour of people from different cultures; or coverage of the construction and operation of systems and resources aimed at members of particular communities. Issues of availability, access and appropriate design should be highlighted.

Although not synonymous with multiculturalism, multilingual information systems and CLIR [as treated in topic 24] are certainly of relevance.

Ethics

Ethical issues arise in a number of the topics listed in this chapter. But in no case is ethics the predominant subject, and the ethical concerns are not specific or unique to IS&R.

Examples are the principles and practice of research ethics, which should be observed when carrying our research on IS and HIB, and the professional ethics which will arise in the practice of these subjects; preserving the privacy of enquirers when mediated retrieval is carried out, for example.

If the IS&R material is presented as one or more courses within a larger programme, then it is likely, and appropriate, that ethical issues will be covered in a specific place in that programme; in a course on Information Law and Ethics, for example. In that case, it would be unnecessary duplication to cover ethical aspects in the IS&R course. In the unusual circumstance where a programme did not cover ethical issues elsewhere, then it would be necessary to include relevant aspects in the IS&R material.

IT

Our strongly held view is that there are no specific and isolated places for the coverage of ICTs and their applications within IS&R. Rather these must be embedded within each topic. All of IR, and much of IS and to some extent HIB, is involved with the use of ICTs, defined broadly. These should not be emphasised for their own sake, but rather as tools to carry content in particular contexts. For this reason, none of the list of topics

deals with ICTs *per se*, although their use will be mentioned and exemplified, or assumed, in virtually all of them.

Relations between libraries, archives, museums

We consider it to be important that the focus for any IS&R course should not be solely on libraries, as has often been the case. There are many spaces and places (real and virtual) to which people go to find information, including - but not limited to - libraries, archives and museums [hence the inclusion of topic 6 in the list above].

Courses in IS&R should therefore deal with principles and practice across a variety of channels, and in a variety of environments, bringing out common principles. This best be done by exemplifying studies in HIB and IS in a variety of environments, with mention of IR systems and processes appropriate to each. Focusing on principles helps avoid the danger of fragmentation, and the presentation of isolated examples. Ideas such as information grounds (IBEC 2005), and the idea of 'institutions of cultural memory', may be helpful in explaining principles and integrating examples and instances.

Children and children's culture

As with multiculturalism, there is no defined place for treatment of issues associated with children and children's culture in the IS&R curriculum. The theme should appear naturally in appropriate topics, such as empirical studies of the information seeking behaviour of children and young adults, the construction and operation of systems and resources for children, and the development of information literacy in children.

Conclusions

IS&R, understood here to include HIB as well as IS and IR, is a very broad, almost all-encompassing, subject. We have analysed it in terms of three aspects, three perspectives, and twenty eight topics, to provide an annotated superset of topics, from which courses of widely differing levels, depth and focus may be constructed.

Together with KO and ILL, IS&R makes up one of the cores - indeed, it may be argued, *the* core - of the LIS discipline. Any effective modern LIS curriculum must include an appropriate treatment of this theme.

This chapter does not, in any way, provide the final statement on the topics with which it deals. There are numerous points requiring further analysis and reflection. Some of the more obvious are:

- elucidation of the most important concepts, frameworks, and models within IS&R, and their use as the basis for curricula
- use of the set of topics to construct some sample curricula in detail
- detailed exemplification of some of the differences in practice and perception in different parts of Europe
- a more detailed working out of the relations and links between IS&R and KO

- further analysis of the feasibility and desirability of the construction of a 'linked core' for LIS, based on three themes: IS&R, KO and ILL
- detailed analysis of how the three perspectives may be used to 'flavour' courses in IS&R, without losing sight of generally applicable principles

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5 The Information Society: Barriers to the Free Access to Information

Aleksandra Vranesh
Herbert Achleitner
Aleksandar Dimchev
Jadranka Lasic-Lazic
Ljiljana Markovich

Information society

The information society is a new model of development. It followed the agricultural, scientific and industrial revolutions. The information society has developed into a global information society. In turn, the global information society is dependent on the development of a national information infrastructure which has developed because of investments, intellectual input, historical, social and political conditions, and, at the same time, a system of organizing and presenting information. Elaine Svenonius concludes that the information society consists of ideology, in terms of purpose and principles; formalization of processes, like linguistic conceptualization and generalization in organizing system.

Based on relevant information, an information society requires two fundamental privileges, the freedom of information on one hand, and the protection of personal and social interest as the other. The main symbols of the contemporary age became: Up-to-date and quick information, implicit as well as explicit knowledge, creativity, competition, multi-discipline, collaboration, flexibility, and minimization of mistakes.

The basic characteristics of the society are powerfully developed sciences, information technologies impacting on our lives, economic development and the production of knowledge. The information society has totally changed the quality of people's lives because of globalization. In the government programs of developed countries this is the basic motto for the improvement of society. Another advantage of the information society is a deeper application of internet technologies. The information society has also changed the model of traditional communications in different fields and created new participants in the information market and media.

Compared to the advantages we must take note of some disadvantages. First is the big gap in the applications of new information technologies between the developed and the underdeveloped countries. For example, the developed countries in the world own 85% of technology and information. Only 25% belongs to developing countries. Because of this the UN is going to organize a conference in Tunisia in 2005, under the leadership of

Kofi Annan. The next disadvantage is that the new information society's goals could hamper security, such as giving access to government information, but we have to be optimistic that humanity will find its balance step by step.

The global information society rests on the cooperation of many information systems. What happens locally, nationally and internationally are equally important. Thus, it is the responsibility of the individual and the group to protect the laws of copyright, freedom of opinion and expression, and freedom of access to knowledge. The lack of intellectual freedoms disturbs the existence of quality information, so to protect and defend those rights society must enforce laws and regulations. Acknowledging this issue as fairly complex, Marianna Tax Choldin supports extensive, thought-out, and up-to-date education of all the participants in the process of disseminating and using information, as a basis for every democratic society.

Librarianship, as a scientific and professional discipline, can contribute to the realization of such an idea, but it can destroy it as well. The libraries and the librarians are the contributors and witnesses of democracy and freedom. However, as librarians we have the responsibility to educate the public as well as government officials of the importance of free access to information.

From the information society to knowledge societies

An example of major events in setting the global agenda is UNESCO and its support of the World Summit on the Information Society (WSIS) including the two meetings in Geneva 2003 and in Tunis 2005. UNESCO has fully supported the WSIS preparatory process from its beginning acting on two levels: (1) the governmental level involving member states mainly through their National Commissions for UNESCO, and (2) on the non-governmental level through professional associations and the building of a civil society. In both cases, UNESCO has succeeded to define and promote its positions, setting the foundation for its contribution to the Declaration of Principles and the Plan of Action that the Summit is expected to adopt.

UNESCO's proposals in the Declaration of Principles and the Plan of Action are based on its specific mandate. This mandate leads UNESCO to promote the concept of knowledge societies rather than that of a global information society since enhancing information flows alone is not sufficient to grasp the opportunities for development that are offered by the knowledge society. Therefore, a more complex, holistic and comprehensive vision and a clearly developmental perspective are needed. The proposals are responses to the three main challenges posed by the construction of knowledge societies: (1) to narrow the digital divide that accentuates disparities in development, excluding entire groups and countries from the benefits of information and knowledge; (2) to guarantee the free flow of, and equitable access to, data, information, best practices and knowledge in information society; and (3) to build international consensus on newly required norms and principles.

The four principles essential for the development of equitable knowledge societies are cultural diversity, equal access to education, universal access to information (in the public domain), and freedom of expression.

Three strategic objectives

To realize these principles, UNESCO works towards the attainment of three strategic objectives: (1) to foster digital opportunities and social inclusion enhancing the use of information communication technologies (ICTs) for capacity-building, empowerment, governance and social participation; (2) to strengthen capacities for scientific research, information sharing and cultural creations, performances and exchanges in knowledge societies; and (3) to enhance learning opportunities through access to diversified contents and delivery systems.

Objective I: Fostering digital opportunities and social inclusion

Knowledge societies are only equitable if all people, including disadvantaged groups (e.g. people with disabilities, indigenous peoples, people living in extreme poverty, and rural regions), as well as women and youth will benefit equally from ICTs for network strengthening, information sharing, creating knowledge resources and developing skills necessary for life/work in the new digital environment. The use of ICTs should be encouraged as a means of empowering local communities and help them combat marginalization, poverty and exclusion, especially in Africa and least developed countries (LDCs). The enhancement of dialogue between citizens and public authorities should be one of the major objectives of knowledge societies. They should be based on the sharing of information and the genuine participation of social groups at various levels.

Objective II: Strengthening capacities for scientific research, cultural creation and information sharing

For knowledge societies to be equitable participation in all forms of intellectual life for educational, scientific, cultural and communication purposes should be ensured. The production and dissemination of educational, scientific and cultural materials and the preservation of the digital heritage should be regarded as crucial elements of knowledge societies. Networks of specialists and of virtual interest groups should be developed, as they are the key to efficient and effective exchanges and cooperation in knowledge societies.

Objective III: Enhancing learning opportunities through access to diversified contents and delivery systems

ICTs should contribute to enhancing the quality of teaching and learning, the sharing of knowledge and information. ICTs have the potential to introduce in the educational process a higher degree of flexibility in response to societal needs. The potential of ICTs to lower the cost of education and to improve internal and external efficiencies of the education system should be grasped. Knowledge societies should offer opportunities to use ICTs as innovative and experimental tools in the process of renewing education. ICTs are to be seen both as educational discipline and as pedagogical tools capable of

enhancing the effectiveness of educational services. A broad-based dialogue among all stakeholders and consensus should be built at national and international levels. This can yield strategies and policies for expanding access to education and learning, progressing towards Education for All (EFA) targets at country level and renewing formal and non-formal education systems.

Barriers in society to the free access to information

The barriers in society can be recognized as: Copyright, licensing, low level of information literacy, labeling, censorship (economic, ethical, ideological, political, cultural, ethnical, national), ethical heritage, political dimension, economic level of development of the society, technological development, and disappearance of the world memory.

Copyright

It is a known fact that the regulations of existing obligations of copyrights are not practiced in many countries. The protection of copyrights is not only a self-defense mechanism of the author to preserve one's intellectual property and possible acquiring of material wealth, but it is also directed to the user as well, which by honoring it, uses the original product of the mind, distributed in sufficient number of copies, with adequate quality of production, which is not damaged by unprofessional duplication.

As the information society becomes global, the protection of copyrights looks like it has outgrown individual and national interest. The World Intellectual Property Organization (WIPO) is based on a wish to spread the idea of protection of copyrights. The fundamental principles on which this idea is based, the Bern Convention and the Universal Copyright Convention, deal with duplication, distribution, taking over, changing without the author's permission, and publishing the author's part during a certain period of time. Application of copyrights depends also on economic stability of one community, in which illegal copying of every product is usual, even official, an unpunished form of a way of acquiring information. Libraries should have clear instructions on honoring copyrights that are more flexible in dealing with publishers or individuals. The new media also influence the defining of new regulations, such as the Digital Millennium Copyright Act (2000).

A reader should honor an author's intellectual ownership by (1) exploring the primary idea, (2) accurately and objectively presenting the idea within which it was created, and not in accordance with one's current needs, and (3) citing the quotations or original ideas with complete bibliographic documentation. The obligations of a librarian are to (1) become familiar with legislative regulations within this field, (2) provide application of general obligatory library regulations (3) educate the reader in honoring copyrights.

Honoring intellectual property rights are a critical aspect of a librarian's duties and, thus, limit an individual's rights to freely copy extended passages without citing or providing compensation to the copyright holder. We are left with the open question, whether the

librarian has an obligation, or perhaps the duty to educate the user about plagiarism of documents. To answer this, the librarian should refer to appropriate legislation as well as fair use guidelines.

The Digital Millennium Copyright Act (DMCA), established in 1998 is the US Congress response to two international treaties, the 1996 World Intellectual Property Organization (WIPO) Copyright Treaty and the WIPO Performance and Phonograms Treaty. The act clearly affects the dissemination of information and, therefore, affects libraries. For example, it restricts using technology to circumvent copyrighted materials. While the "fair use" provision allowed for copying an article in a library, copyrighted material in digital form, that is, disabling the copyright protection of software is prohibited. In general, the provision in the DMC has potentially many negative implications for research and technological innovation.

Is preventing photocopying, printing, re-recording, scanning of certain parts really the protection of copyrights, or is it a way to slow the researcher's process of acquiring data, because they must notify in archaic manner used 50 years ago when they didn't have access to modern technologies?

It is possible that, in concern for the individual, we forget the collective organized approach to an author's work. We consider the librarians to be a link between the author and the user who are making the effort, rationally and in good faith, to protect the interests of both parties. On that occasion we forget a very distinct need of a librarian to offer to the user complex, up-to-date, complete information. However, there are so many exceptions, such as specific bachelor and Ph.D. theses, which are important to a university community, which is the reason why they are protected in the institution of higher education, but without author's prior authorization to appear in other media. If we should expand the problem, the archives of many of our libraries, which protect video, audio or photos of literary evenings, musical, recitals, expositions, could be seen as illegal, because they are not, in the most cases, approved by the authors and participants.

In some countries in Europe, there are initiatives about access to copyrighted documents as discussed by David Prosser:

> a) make it a condition of grant that authors retain their copyright. Authors should have the freedom to publish in whichever journal they consider appropriate, but they should not transfer copyright to the publisher; b) should require that authors deposit a copy of their final, refereed paper in a suitable, fully searchable, freely accessible internet repository or archive; c) should provide, as part of research grants, monies to allow payment of charges for publication in open access journals.[1]

[1] Science and Technology committee inquiry into scientific publications. David Prosser, SPARC Europe, Draft 1.0, 5th January 2004, p.2.

Peter Suber examines the issue of public access to publicly funded research and observes that

> Many Open Access (OA) initiatives focus on taxpayer-funded research. The argument for public access to publicly funded research is a strong one. That is why, for example, 30+ nations have signed the Organisation for Economic Co-operation and Development (OECD) Declaration on Access to Research Data from Public Funding.

The issue of access to public funded research is also critical to librarians.

Furthermore, virtual library initiatives by library consortia and by industry entrepreneurs like Google making digitized documents easily available enhance open access. This approach will ensure permanent and public access to our published heritage. Anyone with an internet connection will have access to these collections and the growing set of tools to make use of them. Universal access to all knowledge has always been the goal of librarianship.

Licensing

In the electronic environment the procedure for licensing, so that the use of certain materials could be increased, benefits the original author and the user by transferring the information as accurately, reliably and correctly as possible. Critical is maintenance of the concept -- maintaining the integrity of the original source.

Copyrights and the acquiring of licenses are predominantly influenced by economic and political factors which can lead to restriction to access. The trend towards the monopolization of the production of information, the combining of publishing houses, aggregators of databases and periodicals are having monopolistic effects on access to information, especially the scientific information. In addition, raising the prices of periodicals and databases affects library access. However, the creation of consortia which negotiate discounts from vendors is a way of dealing with the limited financial resources of libraries. The other strategy is for universities and other institutions to develop open access web sites.

Low level of information literacy

Another obstacle for the free use of needed information is the user's inadequate knowledge of contemporary technologies as well as the librarians' insufficient skills and knowledge. One of the tasks of information professionals is helping people to prepare for new information technologies and information products. In some countries like Bulgaria, Croatia and Serbia & Montenegro, universities, schools and libraries developed standards and special programs for information literacy. Literacy programs are being developed with the help of two projects: (1) the European Computer Driving License (ECDL) and, (2) the International Computer Driving License (ICDL). With these programs, the European Council is creating standards for digital literacy. The basic skills of the literacy initiatives are: (1) the basics of information technology, (2) using computer management of files, (3) computer print preview, (4) working with electronic tables, (5) databases, (6)

presentations on the network through creating, formatting and showing digital documents and skills dealing with e-mail, (7) information and communication, (8) introducing the Internet, and (9) the ability to find, evaluate and use information effectively.

Information literacy was also discussed at the 69th Congress of IFLA in Berlin in 2003. Modules similar to those of the Association of College and Research Libraries (ACRL) were proposed for dissemination. The International Information Literacy Certificate (IILC) creates standards for information literacy for higher education. It was acknowledged that one of the most important tasks for the libraries in the future is to teach information literacy.

Labeling

Labeling is the role librarians assume when advising users that information contained in a document may be inaccurate. This raises the issue of a librarian's duty to provide accurate information vs. intellectual freedom to pursue all types of information.

Censorship - economic, ethical, ideological, political, cultural, ethnical, national

Peter Suber defines open access to the information as

> ...[the] literature is digital, online, free of charge, and free of most copyright and licensing restrictions. Open access should be immediate, rather than delayed, and … should apply to the full text, not just to abstracts or summaries. Open access removes price barriers (most copyright and licensing restrictions. Open access is compatible with copyright, peer review, revenue (even profit) print, preservation, prestige, career-advancement, indexing, and other features and supportive services associated with conventional scholarly literature. The primary difference is that the bills are not paid by readers and hence do not function as access barriers. The legal basis of open access is either the consent of the copyright holder or the public domain, usually the former. Because open access uses copyright holder consent, or the expiration of copyright, it does not require abolition, reform, or infringement of copyright law. One easy, effective, and increasingly common way for copyright holders to manifest their consent to open access is to use one of the Creative Common licenses. Many other open-content licenses will also work. Copyright holders could also compose their own licenses or permission statements and attach them to their works.[2]

Open access is also an important topic in the scientific community. David Prosser states

> …overcoming difficulties for the financial barriers of access of scientific information lately the scientist and the experts from different countries

[2] Open access overview "Focusing on open access to peer reviewed research articles and their preprints" Peter Suber. – www. earlham.edu/~peters/fos/overview.htm

> began to explore new trends of open access. The current system of scholarly communication – where access to the research literature is through paid subscription – is failing. Libraries can no longer keep up with the increasing costs of scholarly resources. (...) Too large a proportion of the research literature is inaccessible to researchers in the UK. In addition, authors of research papers want the widest possible dissemination of their work to their peers world-wide and to all increased readers. The current system needlessly limits dissemination, so lessening the impact of research. (...) Unfortunately, many publishers have constructed elaborate electronic access barriers between the literature and interested readers. They have increased the strain on library budgets by charging extra for online access, and they have bundled electronic journals together in all-or-nothing "big deals" that remove collection development flexibility from the librarian and reduce competition by squeezing out small (often public) publishers.[3]

Lack of access ultimately affects the production of new knowledge.

Censorship is another means of restricting open access. Whether motivated by politics or other reasons, censorship affects the dissemination, diffusion and use of information. This is of particular importance in developing countries where access to information is important for economic and social development.

Access to information is also affected by the increasing cost of serial subscriptions. Scholarly journal prices are high and continue to increase. Every year since 1992 the average expenditures on electronic resources have increased at least twice as fast, and in some cases more than six times faster than average library materials expenditures. As libraries spend an increasing percentage of their budget on electronic resources, collection management to meet budgetary requirements is ever more important, often to the detriment of access to information.

Ethnic heritage

Libraries play a critical role in maintaining as well as providing access to the cultural heritage of societies. The problem in some societies is that policies for the protection of cultural documents either don't exist or are not enforced. Related issues are ethnic minorities, gender and women issues that need greater attention. However, the process of creating a civil society demands access and preservation of the indigenous heritage. The European Commission initiative for access such as PubliCA, PULMAN and CALIMERA go a long way in addressing these issues.

Political dimension

Stephen Gottlieb reminds us that the censorship of tomorrow is made by political choices today. The political dimension of censorship is shown in: (1) lack of inappropriate state

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[3] Science and Technology committee inquiry into scientific publications // David Prosser, SPARC Europe, Draft 1.0, 5th January 2004, p. 1

policy towards the information infrastructure involving new technologies and developing library systems, especially in some countries of central and east Europe, (2) missing of national programs for developing of information societies, (3) inappropriate financing in central and local levels for creating of information resources of libraries and institutions, and (4) forbidden or hidden information.

Many countries in Europe developed the platforms for creating the development of an information infrastructure. The European Union has a number of initiatives for creating an electronic Europe. The goal of a virtual Europe is to create a knowledge economy and improve the quality of life.

Economic level of development of the society

For countries with limited financial resources access to information also has economic aspects. Insufficient funding for all types of libraries is a critical issue for policy makers. Lack of funding affects book acquisitions, acquisition of periodicals, preservation of documents, teaching of information literacy, and the introduction of new information technologies among others. This leads to insufficient information dissemination and use. Some call this "financial censorship." In Bulgaria, for example, a great number of people who have a limited income are dependent on libraries for access to digital information. The rapid advancement of computer technologies, the continuous introduction of evermore powerful PC's and new software limit their possibilities of keeping pace with the information communication technology. This crisis can only be overcome with the support of the public and government policy. Schools, educational establishments, and public libraries need to be supported in their ability to upgrade information technologies.

Technological development

In the cacophonous Internet world technology moves so quickly that we are constantly confronted by new ideas, new concepts and new information technologies. Developed countries have the possibility of infusing new technologies and creating new information settings. Access to information networks and digital technologies have an impact on how information is stored and used. In developing countries libraries have numerous possibilities to transform libraries into learning centers to prepare their population to use new technologies and how to assess information needs. In Europe, efforts and activities of organizations such as EBLIDA plus European Community initiatives on the access to and usability of information focus, among other things, on the role of libraries as centers for enhancing information literacy and their preparation for the Digital Age. The European Library Office that opened in 2004 provides an example of a European Commission funded joint activity in the national library field.

Losing the memory of the world

The continued digitization of information presents new challenges for libraries. The internet is a highly dynamic environment where new information is constantly added and subtracted. This dynamic state poses a challenge to librarians in their traditional role of preserving the artifacts of society. National libraries are already challenged to acquire, provide access and preserve traditional documents, let alone capture the myriad of documents available on the Internet. Potentially this can cause a great loss of the cultural

heritage for the future generations. In 2001, the General Conference of UNESCO approved the resolution for preserving the digital heritage. In 2003, the General Conference of UNESCO accepted the proposal for preserving the digital heritage. It was recommended in these documents that the strategies for choosing and preserving/saving the digital documents should be elaborated. It was suggested that an institution was to be created to coordinate preservation of the documents in collaboration with publishers and vendors of the digital information.

The risk of losing documents is real; thus governments must develop policies to overcome the loss of information. A big issue is the declining funding of national libraries whose role is to collect and preserve documents of the nation's cultural heritage with the help of legal deposits. However, legal depository laws, while they exist, are not always followed in developing countries. Archives too have a similar role and are faced with the same digital challenge. Saving digital information is an urgent task and government policy needs to be developed to determine who preserves which documents.

Some national libraries in Europe, the USA and Australia have begun initiatives on collaboration with other institutions and publishing houses to create digital archives consisting of web sites, databases and other sources in the digital space. Users will benefit from having better access to information because these digital archives will save information using agreed upon standards and search engines. This role of preservation fulfills the societal role of libraries.

The new European initiative – i2010 – provides a framework to address the main challenges facing the Information Society in the next five years. It is built on three pillars: (1) a common information space, creating a modern, market-oriented regulatory framework for the converging digital economy; and stimulating the availability of digital content, (2) investment in research and ICT innovation, and (3) focus on a more inclusive European Information Society.

The above initiative meets some of the requirements of an electronic library which is a digitized collection; a scientific repository of softwares and models; a publisher's collection; the world wide web itself and a virtual temple where the libraries are the pillars and Europe supports the structures that hold them together, taking care about digitization accessibility over networks and preservation and archiving of digital sources. This definition defines the role libraries will play in the 21st century.

The role of libraries in the information society

According to principles of a free society, the role of libraries is defined as "gateways to knowledge, supporters for independent decision-making, cultural development research, life-long learning, democratic values, plurality and diversity of society, contributors to development and maintenance of intellectual freedom, protectors of users' privacy and confidentiality, promoters of responsible access to quality network information for all users, opposition to censorship and all violations of the human rights, and the bridge across the information gap between the regions of the world." Additionally, libraries

fulfill the following roles: (1) preserving the personal values and values of society, (2) protecting children from pornographic literature, (3) educating children, (4) insuring the survival of library services, (5) providing free access, and (6) maintaining the professional values. The above list illustrates the enormous challenges librarians face in the 21st century.

Given these challenges, *IFLA 2005* developed the following position at the Inter-Sessional Intergovernmental Meeting on a Development Agenda for WIPO:

> Libraries constitute the basis from which all citizens can have access to information on an equal basis in a trusted and neutral environment. It is this trusted and neutral source of quality information and knowledge, which gives everyone the opportunity to improve their lives through education and personal development and participate to their maximum potential in the economic life and civil and democratic processes of their society.[4]

The following observation can be made:

• Libraries are pro-copyright because we recognize the need for creative works to be protected from piracy and other unfair exploitation. Upholding copyright laws and encourage users to respect them is important.

• Copyright is not just about the protection of intellectual products, but from its early days meant to balance the need of creators with the user's right to access.

• WIPO needs to establish global minimum mandatory exceptions and limitations to copyright and related rights because there is an imbalance between protection of the copyright holder and the need for free access. The trend towards the information industry monopolizing access to information endangers the production and use of information.

Thus, libraries play a critical role not only in the identification, acquisition, organization, use, and preservation of documents, but they also need to assume a leading role in policy-making to ensure equitable access to information.

In demonstrating the importance of the above role of libraries, the former Yugoslavia provides a helpful illustration. It is instructive how politics and policy affect the ability of libraries to provide access to information. This totalitarian regime through the party apparatus enforced wide-ranging censorship not only of materials produced within its boundaries, but equally important the restriction of access to materials outside its boundaries. International exchange of documents was severely restricted, which in turn affected the development of a civil society. In the case of Serbia, the isolation from the West continued from 1990 – 2000 with obvious consequences to its social and economic development. It is worth quoting Ivana Nikolich who concluded, "we can state it in a nutshell that the librarian who distributes our book abroad, bearing in mind the critic's

[4] Statement available in extenso at: http://www.ifla.org/III/clm/p1/A2K-1.htm

party policy, can never be too much loyal to the government or never too opposed", so he must "defend himself and prove his political suitability for the work he performs."

The role of national libraries and national bibliographies in countries where government censorship was particularly effective creates additional difficulties. Major gaps exist in holdings and in bibliographies. What is needed is an analysis of the library holdings to identify these gaps and develop policies to correct them.

Another issue for national libraries and bibliographic control is the development of standards to facilitate access such as IFLA's International Standard Bibliographic Description of Monographs ISBD(M). Standards were also developed for serials, maps, music and other forms of documents. While standards are desirable, they may not always be able to account for the intricacies of various languages or cultural values.

Organization of knowledge is also standardized with classification systems. The attempt is to develop a universal system. Here too standardization cannot always account for how knowledge is viewed differently among diverse cultures.

The representation of information, that is, the description of bibliographic records, is another task that National Libraries are charged with. Representation of documents is also referred to as "surrogates." Surrogates do not imply a complete description but rather an indicator of content and pointer to related materials. Elements in a bibliographic record are author, title, date and place of publication, subject headings, etc. The question remains as to how much description of a document is desirable?

The control of information has also been affected by the telecommunications revolution. The increased dissemination of information and ease of access has impacted on information policy. In the USA, for example, the US Congress passed the Telecommunications Decency Act in 1996 (CDA). The CDA stipulated criminal penalties for anyone who distributed "indecent" information to children. The act was challenged by the American Civil Liberties Union and the American Library Association and the US Supreme Court ruled that the CDA is unconstitutional and at this point not enforceable. Intellectual freedom and access to information is also being limited by government attempts to filter. Blocking software such as Clear-Play, which allows filtering certain content in movies, are content filters. They can block pornography or violent sites, for example. The goal is to prevent access to objectionable sites, often initiated by parents and libraries to protect children.

Ethical Codes in Bulgaria, Croatia and Serbia and Montenegro

The declarations and manifestos supporting free access to knowledge and information (see Appendix) provide a list of policy statements from government, non-governmental organizations and international agencies and associations. They cover a range of subjects: Human and political rights, protection of electronic data bases, free access to information, privacy, licensing, rights in a digital environment, freedom of expression, intellectual

freedom, national and international information policy, copyright, children's rights, and many other information related topics. This list, while not comprehensive, hints at the complexities of the policy environment that undergird the building of national and global information infrastructures.

Following the establishment of the IFLA/FAIFE Committee, the Croatian Library Association founded its own Committee on Free Access to Information and Freedom of Expression in 1998. Its main goal was to identify policies for improving freedom of information and to prevent any obstacles that might appear. One of their activities was to follow IFLA's initiatives on an international level. As a result, the Croatian Library Association published IFLA's statement on *Libraries and Intellectual Freedom*. Furthermore, they dedicated a special issue of the Croatian Library Association's journal to topics covering the free access of information.

In 2001, the Croatian Library Association and the Chair of Librarianship, Department of Information Science, Faculty of Philosophy, Zagreb organized an International Round Table on freedom of access to information. The aim of the Round Table was that free access to information was considered to be one of the basic human rights of the citizens, and that the library profession had a special responsibility in assisting that the right was met. The development of a democratic society requires well-informed citizens who act consciously and purposefully in their community. The goal of the Round Table was to increase the awareness of the role of libraries in supporting the right to information, pointing out the importance of carefully-built, well-rounded and pertinent library collections that satisfy the several needs of a wide range of users. Another objective highlights the importance of libraries as public access points to networked information. The conclusions of the Round Table were published in *Free Access to Information in the Service of Cultural Development: the Collection of Reports* (2002). The Round Table has become an annual conference for promoting and dealing with the issues of freedom of information.

The specific topic of the Second Round Table on Free Access to Information, held in 2002, was the availability of official publications in the public libraries in Croatia. Research showed that not only official publications were not adequately represented in the collections, but also that the public libraries' facilities were rather poor and could hardly provide adequate services to patrons. It was also observed that government officials were reluctant to put the public information on the web. Public libraries many times had to purchase official publications, adding an additional financial burden to libraries.

At the annual Croatian Library Association meeting (2000) an appendix to the existing code of ethics, dealing with free access of information, was adopted and published by the association. In 2003, the Act on the Right of Access to Information was adopted by the Croatian Parliament as a result of a joint initiative undertaken by a coalition of seventeen non-government organizations. The Croatian Library Association was one of the founding members of the coalition. The Association was actively involved in raising the

awareness of the library profession on the issue of professional responsibility defined as the provision of free access to information for all library users.
All of the above mentioned activities and codices have influenced the educational sector as well. The future librarians, educated at the Faculty of Philosophy, are well informed about the regulations and instruments and prepared to follow them.

In 2003, the Department of Librarianship and Informatics, Faculty of Philology at the University of Belgrade, in cooperation with the National Library of Serbia, the National Library of Matica Srpska, the Library of the Serbian Academy of Science and Culture, the University Library "Svetozar Markovic", Belgrade and the Library of the City of Belgrade organized an international scientific conference. Participants from 19 countries attended (USA, Denmark, Holland, Norway, United Kingdom, Germany, Romania, Bulgaria, Poland, Hungary, Macedonia, Croatia, Slovenia, Syria, India, Ukraine, Turkey and Republic Srpska), including the representatives of IFLA/FAIFE Committee. The Conference themes were free access to information and knowledge, library practices and different categories of users, the level of development of information and communication technology, economic dependence and the dissemination of information as well as the ethics of librarianship.

The Library Association of Serbia was founded in 1949. Its goals were to be an active voice in the public discourses, codify professional standards and ethics, and to develop principles of librarianship and in 1998 to advocate a legal basis for Serbian libraries. A set of revised Statutes of the Association (2004) called for a special Commission for professional ethics and protection of intellectual freedom.

Education of the librarians: Ethics, intellectual freedom and copyright issues

Karl Jaspers wrote that "The university as a home of free ideas, as a community of teachers is united in the process of finding the truth." Libraries and librarians are a critical part of the research and teaching process in the role of bibliographic control – the identifying, acquiring, organizing, storing, and preserving of documents. To fulfill those roles effectively, library education not only has to provide courses in how we carry on these tasks but also to teach the social role librarians play in society.

The issue of ethics in the library field is widely debated in Bulgaria, Croatia and Serbia. In each country the library associations have adopted a Code of Ethics for librarians, similar to the Code of Ethics suggested by IFLA and other international organizations. This Code is also integrated in the library curriculum. The following topics are part of the syllabus in the library-information sciences at the universities in these countries.

- **Information Law**: An introduction to the main concepts of information law; the strategy and national programs for the Development of the Information Society; the European Union statements on the Information Society; the basic constitutional rights of citizens connected with information and access; protection of personal data;

copyright and intellectual rights on the Internet; legal regulations concerning electronic documents and the electronic signature; registration and legal protection of domain names; and contractual obligations of content in Internet.

- **Legal Basis of Intellectual Property**: Understanding and acceptance as well as providing the basic knowledge, skills, values and approaches for the protection of intellectual property.

- **Information Policy of the European Union:** Basic knowledge of policies and legislation of the European Union in the field of the Information Society. Courses need to examine the key European Union legislation on the Internet, access to public information, protection of personal data, protection of intellectual property in the information society, computer crime, the creation of an electronic government, and the introduction of new information technologies. Special attention is given to the processes of globalization and European Union policy in terms of a new world information order. An additional focus is on initiatives addressing the harmonization of national policies on library ethics with those of the European Union.

- **Information Society and Library Ethics:** The information communication technologies revolution requires special attention to the *info-ethics* fields. A course is dedicated to the problems and issues of ethics. Consideration is given to the role of libraries in the dissemination of information, new educational opportunities, research needs as well as communication skills.

In Bulgaria these subjects are taught by faculty from the University of Sofia, Faculty of Philosophy and Law and visiting lecturers from the USA, Germany, the Netherlands and other countries.

The curriculum for Library Studies in Croatia, at the Faculty of Philosophy, Zagreb University, during the fourth year of studies includes the subject Information and the Society covering the economic, sociological and political aspects of information, the distribution of the information, intellectual property rights, censorship, and professional ethics.

Studies of Library and Information Science in Serbia at the Faculty of Philology, Belgrade University, take a different approach: The content of every course in the curriculum includes aspects of the legal regulations, ethical conventions and customs, and social and personal barriers preventing intellectual freedom.

Conclusions

Librarians have an enormous responsibility in the distribution, organization, and use of information. The social impact of the libraries can be seen by the LibEcon study which showed that European libraries in 2001 employed nearly three hundred and thirty seven thousand staff and had 138 million registered users.

The dissemination, diffusion and utilization of information are key elements in building a knowledge society. Libraries are an integral part of the information transfer process and they have a strong commitment to human rights and fundamental freedoms, including freedom of expression. Knowledge societies acknowledge the right to educational opportunities and the preservation and furthering of cultural rights.

UNESCO has three strategic objectives: (1) fostering digital opportunities and social inclusion, (2) strengthening capacities for scientific research, cultural creation and, (3) information sharing and enhancing learning opportunities through access to diversified contents and delivery systems. To meet these objectives, barriers to the free access to information such as copyright, licensing, lack of information literacy, labeling, censorship, disappearance of cultural artifacts have to be dealt with. In addition, economic, technical, ethical, ideological, political, and cultural issues need to be addressed in order for society to develop.

The cooperative effort in digitizing library collections is an important part in creating an information society, but it depends on solving legal, political, technological and strategic issues.

The education of librarians covers a broad range of subjects including users' services, information literacy, information technologies management, professional ethics, intellectual freedom and many other topics. Contemporary library education reflects the needs for building a national and global information infrastructure.

Globalization and the marketization of the economy, which is driven by innovation, demand access to information and benefit from the free marketplace of ideas. This means that librarians have to assume new professional roles to further the utilization of information.

Globalization also highlights cultural, economic and social differences among nations. The level of intellectual freedom and access to information is not the same everywhere. The information haves and haves-not are an important issue globally. Another important issue is library collection development and access policies. Depending on which country, access to documents maybe restricted because of politics, racial and ethnic tensions, cultural attitudes towards gender, sexual orientation, corruption, or simply, dated collections.

Finally, censorship in all forms whether cultural, political or social has to be resisted by librarians if we are to help society to continue its progress towards a "civil society." That is our greatest challenge but also our destiny!

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Appendix

The Declarations and Manifestos Supporting Free Access to Knowledge and Information

The Universal Declaration of Human Rights (Article 19, 1948) and the European Convention on Human Rights and Fundamental Freedoms (1950). Advocates freedom of opinion and freedom of expression.

The Guide of United Nations dealing with the protection of personal computer data bases – the recommendations for the creation of a national guide for the protection of privacy (1990).

UNESCO Manifesto for public libraries (1994) accentuate the work of a library based on equality of the accessibility to knowledge and information regardless of age, race, gender, religion, national, social and linguistic barriers.

The Directive on the Protection of Facts, (European Union, 1995).

European Directive on Privacy Policy in Telecommunications, (European Union, 1997).

Lib-license (USA) www.library.yale.edu/~license/index.shtml and Lib-license in Europe ECUP+ eblida.org/ecup

Position of EBLIDA for rights of the users of electronic documents www.eblida.org/ecup/docs/policy21htm

www.library.yale.edu/consortia/statement.html. Current trends for the purchase of electronic information (ICOLC, March 1998).

www.arl.org/scomm/licensing/principles.html The principles for licensing electronic resources (joint initiative from different association ALA).

ICOLC www.library.yale.edu/consortia

Committee on Free Access to Information and Freedom of Expression (IFLA-FAIFE), established in 1997. Defined and accepted IFLA Statement on Libraries and Intellectual Freedom according to the United Nations on Human Rights. During the meeting 2002 the Committee identified core values of intellectual freedom.

The Directive on Privacy Policy in Electronic Communication, (European Parliament, 2002).

World Organization for Protection of Intellectual Property, 2002. The declaration on the protection of the rights in digital environment.

European Council, 2003. The declaration on freedom of expression over the Internet.

Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the Re-use of Public Sector Information. The Journal of the European Union L345/90(31.12.2003.

The Beacon for Freedom of Expression (1995), Norway. A database of 60 000 books which have been censored in various countries from 1800 until now.

Council of Europe / EBLIDA. Guidelines on Library Legislation and Policy in Europe including several core approaches: free access to information, role of libraries in national information policy, industry of knowledge, protection of the library heritage, and using of internet and network.

The First IFLA/FAIFE World Report on Libraries and Intellectual Freedom (Boston, 2001). Reports on the state of international freedom in libraries in 46 countries.

The Internet Manifesto and the Glasgow Declaration on Libraries, Information Services and Intellectual Freedom (2002). Embraces the fundamental right of human beings both to access and to the free expression of information.

The World Report 2003: Intellectual Freedom in the Information Society, Libraries and the Internet. The report is based on the analysis questionnaire from 88 countries.

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Digital Opportunity Task Force created by G8 Summit (2002). Highlights the importance of integrating ICT development into the G8 and other donor groups. The development of policies and programs with the aim to build functional ICT infrastructures in developing countries to encourage the free flow of information.

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OECD Declaration on Access to Research Data from Public Funding, January 30, 2004.
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Convention on Children Rights (1990); School Library Manifesto (1999) and Children Information Protection Act. These statements indicate acceptance of censorship and blocking of information in order to protect children.
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6 Knowledge Management / Information Management

Gunilla Widén-Wulff
David Allen
Elena Macevičiūtė
Camilla Moring
Richard Papik
Tom Wilson

Introduction

The task of mapping 'knowledge management' education in LIS in Europe is connected to some problematic issues that need to be addressed before we proceed with framing a common European curriculum for this field. The main problem is the lack of definition of the concept knowledge management (KM) and its relation to information management (IM).

KM is a fairly new label that has emerged since the mid-nineties (Schlögl 2005) whereas IM emerged in the mid-1970s (Wilson 2002). It is obvious that these two fields have very much in common and a critically important issue is the discussion and debate of the concepts, whether we can identify two different areas called KM and IM, and what the similarities or differences between these fields are. There are supporters of different perspectives; those who argue that the KM programmes are mainly IM programmes that are renamed and that there is nothing new, relating to information, in the KM programmes that is not already within the IM field (Wilson 2005), those who see the KM and IM domains as distinct but with significant areas where they overlap (Orna 2005), and those who adopt KM as a broader concept than IM.

The fact that the education (and the research field) has also started to focus on knowledge aspects, the knowledge base of individuals and organizations, and even talks of knowledge 'management' could arise from the fact that knowledge is more closely connected to action. For example, people make decisions based on information that they integrate with their own knowledge. Another aspect is that organizations have started to be more aware of the knowledge and expertise that inheres in the persons and will disappear when people retire or leave the organization (Sinotte 2004). The demands of the information management specialists today have developed from the more traditional information resources management towards an understanding of how information is shared and used. Human and social aspects are stressed in combination with knowledge organization and contents.

The unclear framework of the field of KM lies in the fact that it is connected to several other disciplines. This means that it is complicated to define the topic clearly and the contents of the education also vary, depending on which faculty or school the programme is situated within. In Europe the picture of the IM and KM education is scattered while you find IM and KM modules in areas of business and management, computer science, communication and media, education, mathematics, and in LIS schools and departments (Borup Larsen 2005).

However, it has been stressed, by Wilson (2002) for example, that it is important to find a coherent educational programme or curriculum with a core of universally recognized elements for the work of the information manager. This is also what this report is aiming at. The task is not to define whether the schools should call their programmes KM or IM but to find the core contents of the education within LIS in Europe. What is it important for students to learn for the challenges they face today and in the future?

This report will give an overview of what is considered the core contents of the IM and KM education in Europe and make an attempt to find coherence in the IM education. Further we suggest key areas for the European IM education and finally some possible forms of cooperation and networking.

Basic concepts of IM and KM in LIS

Development

In order to give IM and KM education a larger framework the development of the area is described. As stated earlier, the content and scope of information management has been under close scrutiny by researchers and practitioners from several fields (business and management, organization research, information systems, information and communication technology, public administration, communication, information and librarianship) for a long time. Maceviciute (2002) has noted that there were numerous attempts to define the framework for information management. The concepts largely depend on the contents put into the words "Information Management". It is not only the concepts of "information" as such, but the multiple meanings of the phrase, emphasis of its elements, or the word order as well as the scientific perspective. The phrase may mean something different from "information management", i.e., it is used as an abbreviation for: IT management, IS management, management information, information resource management, etc. The meaning of information management is even more clouded by emergence of new related terms, like "Knowledge Management". An attempt to categorize the concept is made by Bergeron (1996) who defines two perspectives on information management: information technology (including information systems) perspective and integrative perspective harmonizing external and internal corporate resources.

As Black (2004a) points out, information management history is just starting to develop. He has undertaken the first British investigations of the history of information management practice (Black, 2001, 2004a; Black and Brunt, 2001). Maceviciute and

Wilson have approached the development of information management research area since 1989 to this day (Maceviciute and Wilson, 2005). But there is a lack of international historical explorations of information management studies in the higher education institutions. Some articles describe the development of information management studies in a single school, a country or a region (e.g., Gudauskas and Glosiene, 1996; Maceviciute, 2002) while some are exploring the extent and contents of the information management studies (Fairer-Wessels, 1997).

However, it is clear that "the state of education for information management is as diverse as the basis for its definitions" (Wilson, 2002). It is possible to trace the information management in LIS curriculum back into the study programmes of special (or technical, or academic) librarianship that appeared around the 1950s-1960s in various countries as studies requiring different foundations from those of public librarianship. During the 1970s and 1980s (and the beginning of the 1990s in Eastern Europe) information management courses were introduced as a part of these studies, or changed the previous studies as more advanced options. According to Wilson, in

> "the UK, the Departments and Schools of Librarianship and Information Science (LIS) have introduced information management options and, in some cases, new degree programmes in the field, and have made a strong bid within their institutions to be the lead departments in this new area. However, there is competition from the business schools (where the focus still tends to be on the strategic role of information technology and on the consequences of that role for the management of IT) and from computer science departments, which, in the early 1990s, felt the effect of declining demand for their courses and which, in consequence, have sought to broaden the basis for attracting students by offering courses in business information systems and information management" (Wilson, 2003).

The beginning of 1990s was marked by the rise of "knowledge management" as a concept within business and computing. The overlap with traditional library science, information systems, and, especially, information management was evident to academics within the LIS field. This overlap, however, seems to have been largely ignored by academics within the business and computing departments. Some information management practitioners and academics saw a convenient opportunity to capitalise on the new fashionable trend immediately. As a number of LIS departments in various universities (especially in the UK) were already incorporated into Business or Computer units, the renaming of previous information management studies was a natural step. However, other Business and Computer departments took the same step with rather different views on the nature and scope of "knowledge management" and renaming with this label entirely different range of courses.

In connection to this confusion, the demarcation along the lines of various disciplines related to the information management lately has become a hot issue. According to Schlögl

> "distinction can be made between content and technology-oriented information management approaches… technology-oriented information management includes data management, information technology management and strategic information technology

> management. The main emphasis of these approaches is the effective and efficient use of information technology... content-oriented approaches focus on information and its use… records management, provision of external information, human-centred information management, and information resources management. The reading of the literature on knowledge management reveals that this term is either used synonymously for information management or for the *management of work practices* with the goal of improving the generation of new knowledge and the sharing of existing knowledge" (Schlögl, 2005).

Lately, more and more authors from various communities are questioning the legitimacy and contents of knowledge management (Wilson, 2005; White, 2004). On the other hand, studying the latest IFLA Conference materials it becomes clear that practicing librarians have found the idea recently and embraced it cordially. In these circumstances, it is worth considering the issue of IM and KM in the light of a European LIS curriculum. The variety of IM concepts and directions in study programmes was always closely linked with the core of the LIS studies, while there is a certain consensus even by the most ardent partisans of KM that it embraces areas that never had anything to do with LIS and belong to general management issues of organizing work practices or dealing with human resources. As Black points out, "while information expertise is likely to thrive, as it has done in recent times, in the domain of IM (and IS), its anchorage in KM is arguably more tenuous" (Black, 2004a). A recent book by Orna (2005) may be a good example of drawing the lines and showing the possible connections.

IM and KM programmes in European LIS schools

Looking more closely into the IM and KM programmes we find the following:

- Information management programmes and courses in LIS schools and departments are typically Masters programmes or optional courses within other LIS programmes. There are some universities providing a Bachelor's degree or courses in IM but these are definitely a minority.

- There are also regional differences in Europe. In the Nordic countries both IM and KM modules are mainly given on a Master's level and most of them are optional. In the Baltic countries there are specific IM programmes and in the UK the most numerous amount of MSc programmes in Information Management are found. In Central and South of Europe the specific IM or KM programmes are very sparse and mostly connected to technology and business units.

- Generally it can be concluded that the KM education in European LIS usually is found as an integrated part of IM programmes and there are very few MSc programmes specifically in KM. The IM education can be divided into three main types of programmes;
  - information technology related courses
  - information in organizations and businesses
  - information resources management and records management

The work group made a content analysis of IM and KM programmes in August 2005. KM modules in ten different schools (countries) and IM modules in nine different programs in Europe were evaluated.

It was shown that both IM and KM modules integrate a very broad area of studies. From the KM program descriptions 64 different topics were found with almost no overlaps between the programmes. The topics covered many perspectives from intellectual capital, learning organizations, knowledge strategies and techniques, to expert systems, intranets and extranets, and database design.

In the descriptions of the IM programmes we found 36 different topics but there were more overlaps between the programmes than it was the case with the KM modules. The topics covered different aspects of records management, perspectives of information society and economy, information seeking techniques, to information and database systems, and information design. An important point to note is that the IM programmes were chosen from LIS schools and units whereas the KM programmes were found both in LIS schools and units in business schools and technical universities. IM programmes in business schools are usually information system oriented and are not included here. This discrepancy affects of course the contents of the programmes but the idea was also to get a picture of how KM is defined while it is known to be a very vaguely defined area.

Further we classified these findings (the topics) into the meta categories: contents, context, process, people, and information technology. We defined these as follows:

> **Contents**; aspects of information resources management
> **Context;** aspects of organizational and environmental issues affecting organizational information behaviour
> **Process**; activities connected to information management (seeking, retrieval, scanning, service)
> **People**; co-operational aspects, networks, individual level
> **IT**; technological aspects, systems, databases

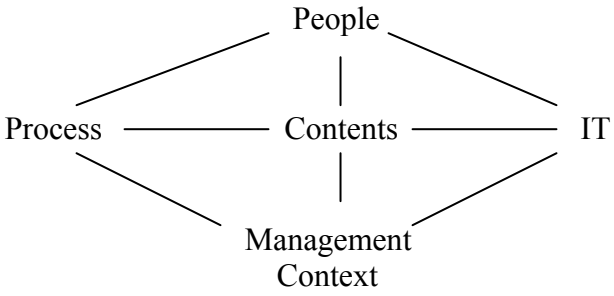

Figure 1: Meta categories of topics included in IM and KM modules

In the comparison between KM and IM it was shown that the most frequent overlaps are in the IT area. The differences between IT perspectives in KM and IM modules are in the types of techniques addressed. Aspects on processes in the KM courses were more often

connected to people whereas the processes in the IM modules were more often connected to content.

In the LIS field in Europe IM seems to be the more common label of the programmes looking at information resource management and human resource management. However, the KM modules often deal with many similar aspects although the perspectives more often are connected to collaboration, networks, and learning. The development of the IM field seems to reach the *process and people* perspective emerging from the KM field.

Table 1: Different aspects in KM – IM curricula

Programme →	**KM programmes or modules** 11 schools / universities Business/management, LIS, Technical/computer			**IM programmes or modules** 9 schools LIS		
Category	**N**	**M**	**Concepts e.g.**	**N**	**M**	**Concepts e.g.**
CONTENT	1	1	Core competence	6	6	IRM, records management
CONTEXT	10	6	Culture, strategies	6	5	Information economy, law, society
PEOPLE	5	5	Individual aspects, groups, networks	1	1	Ethics
PROCESS	17	9	Learning, techniques	6	6	IR, environm. scanning, service
TECHNOLOGY	18	6	Systems, databanks, rules, portals	10	5	Systems, design
GENERAL	7	5	Theory, definitions	3	5	Theory, definitions
N/A	5			4		
N= number of different descriptors in the category M= number of modules / programmes represented in the category						

In table 1 it is shown how the number of different topics is divided into the five meta categories addressed earlier in the chapter. A sixth category, general topics, was used for definitions and theories of IM and KM. The KM programmes have a greater variety of topics describing the courses and modules. At the same time these topics are seldom found as descriptors in more than one module at the time. This shows the problematic situation of finding a coherent understanding of the KM field. The IM programmes have fewer descriptors and these are more often found as descriptors in several modules and programmes.

Concluding that we deal with a very scattered area of LIS education it could be useful to use the information life-cycle model as a basis for the discussion about how the IM field has developed and develops, and to address what we can bring from the KM-field into the IM-field. It can be concluded that the IM and KM education needs to be built on several key areas. At the same time it would be important to use as coherent terminology as possible while this field is suffering from too many vague definitions and connections to adjacent areas.

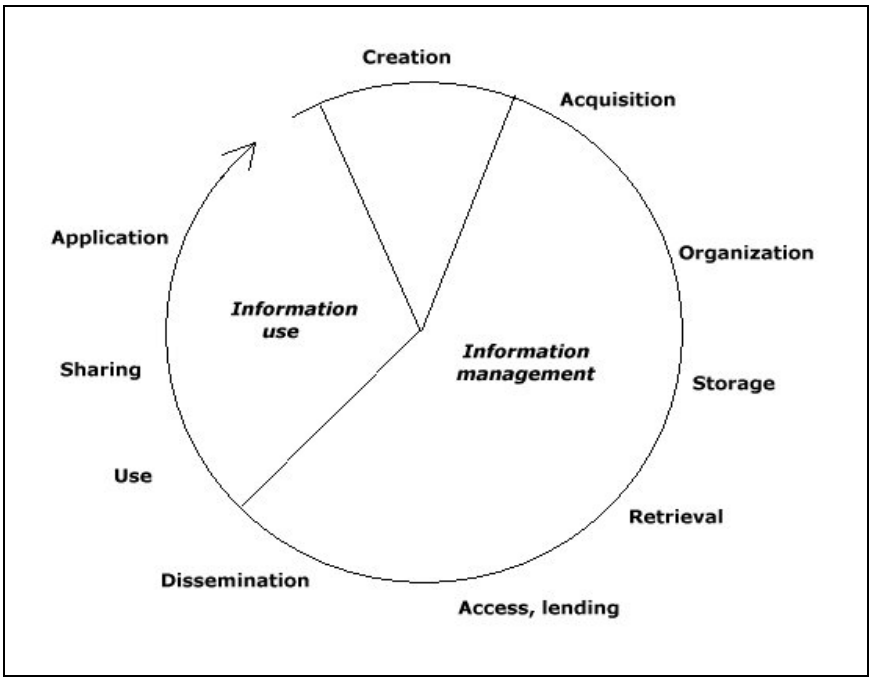

Figure 2: The extended life-cycle of information (Wilson 2005)

Based on the content analysis of the IM and KM programmes in European LIS schools today the work group would suggest that the IM (and KM) education in LIS includes mainly aspects on information/knowledge creation, acquisition, organization, storage (technology), seeking, accessing, dissemination, use, sharing, and learning in a complete circle. This happens on different levels; the individual, organizational and society levels. Depending on the LIS school, the level of the programme, these aspects should be important to bring to attention in the education (see further in the next section). We suggest that Wilson's view of information management be extended further to encompass use, sharing, application and creation. By engaging and absorbing the pertinent discourses within knowledge management literature we can only strengthen the development of a European Curriculum for Information Management.

Competencies needed and suggested key areas for IM education

The development of the IM field towards integrating KM perspectives such as information use through learning processes, networking and collaboration is reflected also by the competencies needed by information workers and specialists of today. Knowledge management seems generally to have contributed to a renewed attention toward the importance of information and knowledge within organizations, and has led to discussions above new roles for the information professional. Roles such as *knowledge champions* (De Cagna 2000) or *knowledge navigators* (Chase 1998) have been suggested for librarians and information specialist within the KM-field. Within these roles the traditional role of information specialists and information managers is stressed to underline the uniqueness of the profession; e.g. administration of information resources

and technology, knowledge organization, and collection management. These skills can all be referred to as information management skills.

There is little or no evidence, however, that these ideas have been taken up to any extent within organizations and Earl (2004) noted that more than half of the 20 Chief Knowledge Officers he studied in 1998 had gone within two years of the study and had not been replaced. Others have commented on KM as a 'failed initiative' (Davenport, 2005).

However, the KM initiative has drawn attention to skills of importance such as communicative, pedagogical or facilitation skills. In doing so, of course, it has simply taken over other initiatives that have been pursued in organizations, from 'organization development', to the 'learning organization'. The difference lies in the fact that the LIS field has, in general, ignored these prior developments, other than in courses on general management – to which it may be said they properly belong. Indeed, we may argue that the incorporation of these ideas into LIS education is best done through the development of a management module rather than by pressing them into an information management module. The latter course of action is likely to perpetuate the confusion between KM and IM.

We can conclude, therefore, that the 'management' issues within a broad IM programme can be separated from the '*information* management' issues or that, if IM is simply a module within a general LIS degree programme, it can be complemented by a general management module and the connections made explicit.

IM education in LIS is a field that has undergone rapid development because of its connection to technological aspects and the emerging and growing interest in intellectual and human capital in organizations. Inspired by our own survey of curricula in Europe, and a survey conducted by Todd and Southon (2001) among library and information professionals, we recommend that the following core areas should constitute IM education in European LIS schools.

- Contents – different forms of information (i.e. external/internal, formal/informal) Different approaches towards the nature, role and value of information and knowledge in organizations
- Context – the role of organizational culture, information society. Knowledge creation.
- Process – information storage and retrieval, information seeking, tools and techniques for information dissemination
- People – aspects of communication, learning, networking, and the social environment. Information sharing and utilisation
- Technology – information systems and design
- Strategic and planning issues, including ideas of intellectual capital.

How these are integrated depends on conditions in different countries, how the undergraduate and master's degrees are structured, the context of the whole LIS education, legislation etc.

The following aspects underpin the *management* perspective of IM and should be included in any general management or organizational behaviour module:

- Organizational culture and behaviour
- Organizational learning
- Individual and social learning
- Information literacy in the workplace

Conclusions

The IM and area of LIS is quite wide, both in the variety of ways of understanding the core of the field, but also in the variety of co-operative possibilities. There are many players in this field (companies, universities and academics, of course information institutions and libraries), and there are also good possibilities on the labour markets of Europe for future information professionals (an opportunity to capture new posts in knowledge-based companies, and as the digital economy opens up new opportunities in areas such as e-business and e-government).

There are many opportunities for co-operation and networking in this field and in the effort to find a core curriculum in the IM area greater co-operation should be recommended. Subjects and topics of co-operation can be following;

1. academics of LIS and business (common research projects, patenting – intellectual capital, intellectual property management, and competitive intelligence);

2. academics of LIS and government (knowledge-based society, learning society, intellectual property management);

3. academics of LIS and government and business (e.g. industrial technological clusters, R&D activities for industrial spheres, competitive advantage strategies and tactics);

4. academics of LIS and professional organizations (Special Libraries Association– European Chapter, IFLA, SCIP – Society of Competitive Intelligence Professionals, ASIS&T, etc.)

5. European LIS conferences, seminars and workshops;

6. exchange programmes in LIS;

7. didactics of teaching IM;

8. e-learning and blended learning methods in IM topics;

9. IM topics in European projects of practice (Leonardo da Vinci Programme, practice in companies and institutions with interests in IM areas)

10. a comparison of curriculum of LIS schools, business schools and industry oriented schools, and regular outputs in European library journals, conference proceedings etc.

The co-operation can achieve a successful work in application for international and local projects, grants (under 'ministries of education', 'ministries of commerce', etc.) and establish new directions and strategies of research connected to IM topics.

Finally, the task to map European IM curricula integrates some problematic issues concerning the definitions of the area and in finding a clear framework for the topic. The development of IM curricula within the LIS field has been a process underpinning a lot of changes. It is important to notice the trends and to be aware of the new demands in the society affecting the education. An important result from the group work was the attention to the multifaceted field of IM education. From the content analysis of the existing IM and KM modules it is shown that especially the aspects on people and processes can be incorporated into the IM field and are likely to enhance the impact of this area in the future.

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7 Knowledge Organization

Vanda Broughton, Joacim Hansson,
Birger Hjørland & Maria J. López-Huertas

Summary

This chapter deals with the part of the library and information science (LIS) curriculum involving knowledge organizational systems and processes, which is an important core of the LIS discipline; arguably - together with information seeking & retrieval (IS&R) - the central core. Knowledge Organization (KO) contributes to make documents accessible for users whether they browse or search. KO is about providing optimal conditions for the identification and retrieval of documents or parts of documents. The suggestions made in this chapter are based on an analysis of the scientific knowledge about KO as developed until now.

The concept of knowledge organization

Knowledge Organization (KO) in the narrow sense is about knowledge organizing systems (KOS) such as bibliographical records, classification systems (e.g., DDC, LCC and UDC), thesauri, semantic networks and it is about knowledge organizing processes such as classification, document description, "descriptive cataloging", indexing and subject analysis. KO is performed in 'memory institutions' such as libraries, archives, museums, and online databases and on the Internet[1], but also outside such institutions, e.g. in "back-of-the-book indexing" or in so-called "personal information management systems". KOS may be universal (covering all fields of knowledge) or they may be limited to certain domains or document types.

A common way to distinguish between information retrieval (IR) and KO it by emphasizing that KO is about cataloguing, indexing, classification etc., that is: *assigning terms, texts or symbols to records*, while IR is about optimal strategies for searching documents or their representations. The assignment of terms, texts and notations to records (or to the objects themselves as for digital resources), is related to the intellectual or semantic content of the resource and is independent of the format in which the

[1] Each of these memory institutions has their own traditions and principles. There has been a tendency within LIS to concentrate on principles developed for libraries and electronic bibliographical databases which by the way also represent separate traditions). Implicit in the term information science is, however, a generalization that also covers archives and museums, among other institutions. Because the borders between "published documents", archival records and museum objects are blurred on the Internet, it is today very important to consider principles from all kinds of institutions in the curriculum, not just libraries.

information is presented. KO is also concerned with the design of KOS, and with the principles and methodologies for building semantic tools.

In the automated context this differentiation between KO and IR becomes blurred because automatic assignment may be a superfluous step in the retrieval process. Why use, for example, bibliometric methods to construe thesauri, if the bibliometric methods may just as well be applied directly to IR by the end-user?

In differentiating KO and IR it is important to recognize that there exist different approaches to IR as well as to KO and that some approaches (e.g. bibliometric approaches) may be more closely internal related whether applied to IR or to KO compared to other approaches (such as facet-analysis or domain-analysis).

The basic functions of KO in the context of LIS are:

- Facilitate searches in, among others, catalogues and bibliographies (IR-function)
- Providing information about documents of importance for the users' decisions to borrow the documents (e.g. in the form of abstracts and notes) as well as information about how to obtain a given document. (Document information function)
- Shelf arrangements and other kinds of linear ordering (ordering function).[2]

Each of these functions may be met by the same KOS or by different KOS. Shelf-arrangement is a narrow function[3], which puts major constrains on a given system, why the most challenging functions are related to IR and document information. It is important that each of those functions be considered in their own right. Many advanced tools are able to facilitate IR far beyond the traditional systems constrained by their shelving purposes.

Traditional KOS, e.g. classifications and thesauri are often used for organizing and searching printed media. Often this is used as an excuse for doing research on such systems. This may be the case in the following quote:

> "Today it is beginning to seem as if all information is available in full text. However, this is not true, nor will it be true in the immediate future. Vast numbers of legacy documents remain, and converting these to searchable text is an expensive, long-term proposition. Furthermore, many documents are still being

[2] KOS have a part to play in any linear order e.g. in lists in catalogues and bibliographies, and in the display of search results. These might be in digital as well as print formats. Directory style displays and browsing structures for online resources also make use of KOS.

[3] Mills (2004, p. 544-545) writes: “Shelf order. This is scarcely ever mentioned in the literature on retrieval, being treated very much as a poor relation, if not a terminally ill one. This is most unfortunate, since it is the very first index to the resources of the library for the great majority of library users and in many cases the main or even only one. Although this level of retrieval may be regarded as small beer and not deserving much attention, the special demands it makes because of its limitation to a single, linear order has had an important effect on the development of the theory of library classification”.

> produced only in printed form. Therefore, thesauri and indexing will continue to have a place at least for awhile in facilitating access to documents for which electronic text is not available. Their long-run value, however, depends on integration with full-text search" (Milstead, 1998).

We find that it is important not to consider knowledge organization as an academic discipline to be related to the pre-digital environment. Of course shelve arrangement and manual KO will still occur, but it is too limited and it is too defensive to leave the digital challenge to other fields such as computer science. Approaches to KO should be evaluated on the same conditions. The most important condition to consider KO is as tools for coping with the digital environment. If, for example, thesauri are not suited to such tasks, they should only occupy a limited place in the curriculum.

Another quotation from the same source is:

> "The explosive growth of Web search engines, with their primitive algorithms, has had some rather unfortunate effects, to my mind. Some of these engines appear to have been developed by people who saw a need, but who had not the vaguest idea that there was already a history of development of tools to fulfil similar needs. There is little evidence that some of these developers had ever used either Dialog or a library catalog. " (Milstead, 1998).

We believe that it is wrong to reproach the developers of Internet search engines that they have not considers the theory of library classification. There is not doubt, in our minds, that the search engines are gigantic successes and that it is us that have to proof that traditional KOS have a role to play in the digital environment. In other words the search engines must be considered one approach to KO among others, and the relative benefits and drawbacks of different approaches have to be demonstrated scientifically, not by professional wishful thinking.

In the teaching of KO it is important to include a historical and theoretical perspective on the development of KO within LIS as well as in an interdisciplinary perspective. Interdisciplinary developments are important to consider because important concepts, theories and findings do not follow disciplinary borders, why true progress must be interdisciplinary based.

It is not easy to outline the different approaches to KO because what is considered to belong to KO or not depend on the theoretical perspective. Also the field has been very much driven by new technologies and other influences which cross different theoretical perspectives. Below a historical outline of approaches to KO is presented. It is recognized that other interpretations are possible and should be encouraged.

Approaches/Traditions in knowledge organization

1. The traditional classification systems used in libraries and databases, including DDC and UDC[4] still plays an important practical role in libraries and still influences the teaching and study of KO. The DDC system was published in its first edition in 1876. The question is, however, what kind of approach to KO such systems can be said to represent?

   As opposed to the facet analytical tradition mentioned below there is no evident theoretical approach in enumerated library classification systems. There are important differences between different systems such as DDC, UDC and LC, but these differences will not be dealt with in this place. The DDC system is very popular and has, for example, in 2001 been introduced by the *Danish State Library* in Århus[5]. This decision was probably taken because most books purchased to this library are already DDC classified by *the Library of Congress*. From a library administrative point of view this is a dream[6]. Its main advantage may be that it is a standard, not a system optimized to any particular collection, domain or user group. Because of this fact it is probably not as much the users dream as are other systems. [7] While the library administrator may prefer KOS that are identical from one library to another, the user may prefer systems that correspond with how a given subject is presented to him in educational programs, in textbooks, and in other domain-specific KOS.

   > Example: Dewey (2003, p. xliii) writes: "A work may include multiple subjects treated separately from the viewpoint of a single discipline. Use the following guidelines in determining the best placement of the work: (A). Class a work dealing with interrelated subjects with the subject that is being acted upon. This is called the rule of application, and takes precedence over any other rule. For instance, class an analytic work dealing with Shakespeare's influence on Keats with Keats. Similarly, class a work on the influence of the Great Depression on 20th century American art with American Art. . . .".
   >
   > Such a decision makes it difficult for people seeking information, for example, on broader influences of Shakespeare, relative the Great Depression. It may be a suitable principle for universal system which has to function for shelf-arrangement. It is based on the assumption that works have inherent subjects, not that subjects are determined by the questions the users put to them. [8]

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[4] There are important differences between systems such as DDC, UDC and LCC that are not considered here even if one might claim that they represent tree different approaches to KO.

[5] About reasons to prefer the DDC system see, for example, Shorten; Seikel & Ahrberg (2005). About reasons not to choose DDC see, for example, Hansson, 1997.

[6] It is thought provoking that the field we now term LIS was termed *library economy* in the first edition of the DDC and that this was not related to classification in philosophy.

[7] This does not imply, of course, that these systems do not consider the user's needs. If they did not, they would not be usable. In many cases, however, they do not model relations between subjects, as these are perceived by contemporary experts but prefer to stay the established standard relation of subjects.

[8] In other words: The principle is based on the positivist assumption that the subject of a document is a kind of fact, which the classifier may directly observe, as opposed to the pragmatic assumption that the subject

If this interpretation is correct then are opportunities for scholarly study and further development of this system limited, why the teaching in library school tends to be limited to historical studies and practical matters. This is consistent with the well known fact that new systems based on research or new theoretical principles have extremely difficult conditions in penetrating into the library sector[9]. [10]

Advanced research and teaching of knowledge organization should aim at provide optimal solutions to some group of users or to some kind of ideal goal, why it is a dilemma of such research and teaching to choose between what subject relations are considered important in discourses outside of LIS and what is considered administratively practical within LIS. In other words: It is dangerous for knowledge organization as an academic field to be limited in outlook by conservative "pragmatic[11]" considerations.

2. A distinct approach to KO is the facet-analytical approach founded by Ranganathan and further developed by *the British Classification Research Group* and the editors of *the Bliss Classification system (2nd ed.)*. This is one approach, still alive, and also applied in the digital environment. It is the most distinct and "pure" theoretical approach to KO, but not by implication necessarily the most important one. Principles from this tradition have increasingly influenced the development of classification systems, also old systems such as the DDC[12]. The strength in this approach is it logical principles and the way it provide structures in KOS (classifications as well as thesauri, for example).

   Mills (2004, p. 541) writes that he does not see faceted classification as a particular kind of library classification but as the only viable form enabling the locating and relating of information to be optimally predictable. . . .The continued existence of the library as a highly organized information store is assumed." And on p. 547: "The development of logically structured classifications covering the whole of knowledge is still unique in the field of LIS. These provide detailed maps of knowledge to assist in the searching of stores of records and can be used as the basis of, or valuable supplements to, numerous other retrieval languages".

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of document should be determined by considered which interpretation is most fruitful for the users - or for the goal of system doing the classification.

[9] *Bliss Bibliographic Classification, 2nd*. is, for example, recognized for being a modern and advanced classification system developed in the facet analytic research tradition. It is not much used in practice, which is an indication of the limited possibilities for improving library classification systems

[10] Nonetheless there have been two important theoretical principles associated with library classification schemes. Founding figures like Cutter, Bliss and Richardsson found that the organization of books in libraries should be based on orders discovered by the sciences. Book classification should reflect knowledge organization, hence the name. However, this view of knowledge must be seen as rather positivist in that it was supposed that knowledge presented itself as facts. This may be the main difference between this approach and the domain-analytic approach. The other important principle is *the principle of literary warrant*, that decisions about classes and relations should be based on the literature. This provides the empirical basis for the classification systems.

[11] This use of the word "pragmatic" is not synonym with the philosophical understanding of pragmatism, which we find important. See 'Pragmatism' in Hjørland & Nicolaisen (2005).

[12] Cf., Miksa (1998).

We find it necessary to recommend not to consider this tradition in KO alone in LIS-education, but to consider it in the context of other approaches, such at those presented here.

3. Both the traditional classification systems (like UDC) and the facet-analytic method came under attack from the information retrieval tradition (IR), which was founded in the 1950'ties with experimental traditions like Cranfield (later continued in the TREC-experiments and with the development of Internet search engines). The Cranfield experiments found that classification systems like UDC and facet-analytic systems were less efficient that free-text searches or low level indexing systems ("UNITERM"). Although KOS such as thesauri and descriptors are children of the IR-tradition, the main tendency has been to question the value of traditional classification and facet analysis and human indexing all together. It has more or less implicit worked with the assumption that algorithm working on textual representations (best full text representations) may fully substitute human indexing as well as algorithms constructed on the basis of human interpretations[13].

   If one does not question the results obtained in this approach it implies the end of knowledge organization as a research field to be substituted by IR. This is the reason why it is important to consider IR as one among other approaches to KO in order to identify its relative strengths and weaknesses.[14]

4. User oriented / cognitive views have been influential in *Library and Information Science* in the last decades. However, more so in information seeking studies than within KO. One of the specific examples on systems designed on the basis of user studies and cognitive studies is "The Bookhouse" made by Annelise Mark Pejtersen's[15]. This system represents in many different ways a pioneering work. However, the theoretical basis for constructing KOS from a user-oriented or cognitive point of view is unclear hand has been critized. [16]

   Fidel & Pejtersen (2004) argues for what is termed the "Cognitive Work Analysis framework" and writes that ". . . Secondly, while guidelines about useful methods and research questions can be developed for a particular work domain, these cannot be automatically generalized to another domain". In this way their view is related to the domain-analytic view presented below. What may still be different is whether the classical principle of "literary warrant" (perhaps implicitly) is replaced with empirical user studies.

5. Bibliometric approaches. Some attempts have been made to combine bibliometrics with more traditional approaches to knowledge organization and to

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[13] What is termed "text categorization" is a machine-learning approach involving manually categorizing a number of documents to pre-defined categories. This technique is an example in which human classification and machine classification is combined.

[14] Of course traditional classification systems may still be needed for shef-arrangement, but this is a rather narrow issue, which cannot in my opinion justify the existence of the larger research field of KO. Users are increasingly relying on Internet search Engines to find information, also information from libraries, why library KO compete with other providers of subject access and descriptive access to documents.

[15] Pejtersen (1989a+b, 1992).

[16] Criticism of the cognitive view includes Frohmann (1990).

information retrieval. Kessler (1965), Salton (1971), Rees-Potter (1989, 1991), Pao & Worthen (1989), Pao (1993) and recently Schneider (2004) have done research in this field and, for exampled, investigated whether thesauri can be constructed on the basis of citation-relations between documents. If such studies are considered seriously must bibliometrics be considered as one among other approaches to KO, the relative merits of which must be further investigated. By implication should maps like the ones produced by White & McCain (1998) also be considered a kind of KOS.

As is the case with the IR-tradition, the question of whether or not bibliometrics is a part of KO cannot be answered a priory but depends on whether efficient KOS can or cannot be produced by bibliometric means. In other words: Given the existing knowledge, serious studies in KO cannot ignore bibliometrics, which add an essential dimension for the theoretical understanding of KO as well as some specific tools for practical KO.

6. The domain analytic approach. Domain analysis is an attempt to provide relevant subject knowledge within the domain of LIS in a way that strengthens the core LIS perspectives and competencies. Knowledge organizing systems and processes are understood from a study of the domain that is being organized. The way domains are being analyzed is mainly by studying the actors in the domain (sociologically) and the theoretical assumptions put forward by these actors (epistemologically).

   An important example of a domain-analytic approach to KO is made in Arts by Ørom (2003). Ørom considers different "paradigms" or "epistemologies" in arts and demonstrates how these paradigms have influenced major KOS such as UDC, DDC, LC and *the Arts and Architecture Thesaurus*.

   Given systems are thus always more or less based on a certain view of the domain being organized. It follows that the construction, evaluation and use of a KOS should be based on a reflective consideration of such views. In other words: It becomes important to consider different epistemologies, both at a general level and at a domain specific level.

   An example of a thesis written by a graduate student in knowledge organization is Abrahamsen (2003). This is about the music domain. Although the papers are very different there are enough similarities between Ørom (2003) and Abrahamsen (2003) to provide an idea of what the domain-analytic approach to knowledge organization is when it is generalized from a specific domain.

   The domain analytic approach is an important theoretical addition to the other approaches mentioned. It is also an approach that preserves the librarians' core qualifications and identity compared with computer science. A librarian or an information specialist who knows something about the domain of, say, arts, has better qualifications to help users, to classify and index literature and to search and select information. It should be possible within a few teaching hours to provide knowledge about a domain such as arts corresponding to the content of Ørom (2003). Although no amount of knowledge is never enough, such an amount will clearly provide an important foundation. The domain analytic approach does not substitute LIS knowledge with ordinary subject knowledge,

and much knowledge from the other approaches should be integrated in this approach.

7. Other approaches. Many other approaches have been suggested. Among them semiotic approaches, "critical-hermeneutical" approaches, discourse-analytic approaches and genre-based approaches. They are not going to be discussed further at this place, but the above mentioned approaches can be seen as belonging to the same family to which also the domain-analytic approach belongs. What should be mentioned as an important trend is, however, an emphasis on document representationen, document typology and description, mark up languages, document architectures etc. Dahlström & Gunnarsson (2000); Francke (2005); Frohmann (2004_{a+b}) and others may be considered part this approach.

What units or entities are being organized?

The term "knowledge organization" implies that what is being organized is *knowledge*. This term goes back to founding figures in the field. Bliss (1929) is perhaps the most important work contributing to establishing the name of the field. His view, along with people like Cutter, Richardson and & Sayers argued for the term *knowledge organization* in LIS because they believed that book classification should follow scientific progress in different domains.

Many other terms, concepts and units have, however, been suggested. Anderson (2003) in a short paragraph introduces at least seven different terms:

> "The description (indexing) and organization (classification) for retrieval of messages representing knowledge, texts by which knowledge is recorded and documents in which texts are embedded. Knowledge itself resides in minds and brains of living creatures. Its organization for retrieval via short- and long-term memory is a principal topic of cognitive science. Library and information science deals with the description and organization of the artifacts (messages, texts, documents) by which knowledge (including feelings, emotions, desires) is represented and shared with others. These knowledge resources are often called information resources as well. Thus 'knowledge organization' in the context of library and information science is a short form of 'knowledge resources organization'. This is often called 'information organization'". (Anderson, 2003, p. 471; underlining added). [17]

Some authors (e.g., Salton, 1968; Svenonius, 2000 and Taylor, 1999) prefer to term the field information organization while some (e.g. Smiraglia, 2001) find that what is being organized in knowledge organization are works.

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[17] A more comprehensive list of units is presented in *Lifeboat for Knowledge Organiation*, http://www.db.dk/bh/lifeboat_ko/HISTORY%20&%20THEORY/units_in_knowledge_organization.htm

Sometimes the use of different terms for the field has not theoretical implications, but is just a question of fads in terminology. Such a loose use of scientific terms is not healthy from a scientific and educational point of view. We should aim at a clear terminology in which different terms are only used if they mean different things, and the people using the terms should argue why they consider the terms they use the best choice. In cataloguing theory, for example, important arguments have been brought forward for considering a work as the organizing unit. It should be an educational goal to teach the students such different views as well as important arguments which have been raised for and against them.

Two things are important to consider in relation to teaching units. The first one is that different approaches to KO implicitly or explicitly operate with different units. The implication is that the teaching of units cannot be separated from a historical and theoretical perspective. The second thing is that a given terminology may not reflect the units, which are actually used. The term "information retrieval" implies that what is retrieved is "information". The overwhelming amount of studies using this term are, however, retrieving bibliographical references (which may or may not inform the user in the way they were intended), why "document retrieval" may be a better choice. When considering terminology we should consider what concretely is being applied in KO.

Based on such considerations, the following units may be related to the former presented approaches to KO in the following way:

1. The classification systems used in libraries and databases, including DDC and UDC	Concretely are documents the units organized, but the term "knowledge organization" implies a more abstract ambition to base classification on scientific and scholarly knowledge.
2. the facet-analytical approach	"Ideas". This approach removes itself somewhat from the empirical basis of documents and introduces logical principles for KO which are mainly based on rational intuition.
3. The information retrieval tradition	Concretely are words, co-word relations and word-document-relations the units. However, "information" is the claimed unit.
4. User oriented views	Individual, cognitive structures
5. Bibliometric approaches	Documents and citation patterns between documents.
6. The domain analytic approach	"Knowledge" is replaced with "knowledge claims" (documented knowledge claims) or works. (What are organized are not eternal truths, but works with claims which are substantiated from one or another epistemological perspective).

In conclusion: The educational goal in KO should be to educate the student to be able to know that what is considered units or entities in KO has changed in the history of the field. Different kinds of units are related to different theoretical outlooks and have theoretical implications.

Kinds of Knowledge Organizing Systems (KOS)

In the narrow meaning (within LIS) the kind of KOS, which are considered include:

- Enumerative classification systems a la Dewey, UDC and LCC
- Facet analytic systems a la Bliss 2nd ed.
- Subject headings like LCSH
- Systems based on free text searches
- Thesaurus based systems
- Bibliometric maps
- Algorithms in search engines
- Archival systems (based on the principle of provenance)
- Ontologies,
- Semantic networks
- "Topic maps"[18]
- etc. [19] [20]

These systems may all be regarded as kinds of semantic tools providing selection of concepts and information about their semantic relations. Students in KO should learn about the similarities as well as the differences between different kinds of KOS such as those listed above.

In the broader meaning KOS include the way knowledge is organized in society, e.g. the organizational structure of universities, institutes for higher education and research, the structure of scientific disciplines and the social division of labour. Also encyclopedias and libraries are examples of this broader meaning of KOS. The UNISIST model (cf., Fjordback Søndergaard; Andersen & Hjørland, 2003) is an important model of KOS, which relates KOS in the narrow sense with KOS in the broader sense.

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[18] http://www.xml.com/pub/a/2002/09/11/topicmaps.html

[19] Libraries themselves as well as encyclopedias, specialized journals and the system of primary, secondary and tertiary information sources may also be considered examples of KOS. The teaching of KO should ask whether these systems are based on the same or other fundamental principles? It is the basic principles and functions, which define and delimit KOS. In archival science is the principle of provenance an important principle in KO.

[20] Hodge (2000) also mentions *Authority Files, Glossaries, Dictionaries and Gazetteers* (A gazetteer is a list of place-names as the index in an Atlas) . It is of course important an important goal for research in KO to make a well-argued taxonomy of different kinds of KOS.

The broader perspective of KOS is important to include in LIS education. Just to mention one example. Traditional systems such as the DDC are based on disciplines:

> "[A] work on water may be classed with many disciplines, such as metaphysics, religion, economics, commerce, physics, chemistry, geology, oceanography, meteorology, and history. No other feature of the DDC is more basic than this: that it scatters subjects by discipline" (Dewey, 1979, p. xxxi).

When this is the case it seems rather obvious that research in KO should relate to research on the development and dynamics of disciplines (see, e.g., Stichweh, 2001).

Another example on the value of the broad perspective is provided by Hansson (1999), who shows how the Swedish classification system SAB must be understood from a cultural-political perspective at the time it was established.

Although the broad perspective is important, there is a danger that the teaching of broader perspectives of KO and KOS do not provide specific insight on how to construe, evaluate and use KOS. Any concern with broader perspectives should be justified by demonstrating consequences for KO in the narrow sense.

Theoretical foundation of knowledge organization

KOS in the narrow sense of the word are semantic tools. They consist of words and concepts and semantic relations. A theory of KOS shall therefore explain how terms and concepts should be selected and defined and how their semantic relations should be defined and selected.

Concept theory should be introduced in the education of librarians and information professionals. There are different concept theories, which are related to more general epistemological views. In teaching LIS concepts should be considered from the pragmatic perspective: What difference does it make for the users whether we apply one or another theory of concepts? What difference does it make whether we define a particular concept one way or another?

Concerning semantic relations a set of important relations should be introduced and their utility for the users should be examined. Some important kinds of semantic relations include:

- Active relation: A semantic relation between two concepts, one of which expresses the performance of an operation or process affecting the other.
- Antonymy (A is the opposite of B; e.g. cold is the opposite of warm)
- Associative relation: (A is mentally associated with B by somebody). Often are associative relations just unspecified relations. In thesauri are antonyms, for example, usually not specified but may be listed, along with terms representing other kinds of relations, under the label "associative relations".

- Causal relation: A is the cause of B. For example: Scurvy is caused by lack of vitamin C.
- Homonym. Two concepts, A and B, are expressed by the same symbol. Example: Both a financial institution and a edge of a river are expressed by the word 'bank' (the word has two senses).
- Hyponymous relationships (hyponym-hyperonym), generic relation, genus-species relation: a hierarchical subordinate relation. (A is kind of B; A is subordinate to B; A is narrower than B; B is broader than A).
- Locative relation: A semantic relation in which a concept indicates a location of a thing designated by another concept. A is located in B; example: Minorities in Denmark.
- Meronymy, partitive relation (part-whole relation): a relationship between the whole and its parts (A is part of B) A meronym is the name of a constituent part of, the substance of, or a member of something. Meronymy is opposite to holonymy (B has A as part of itself). (A is narrower than B; B is broader than A).
- Related term. A term that is semantically related to another term. In thesauri are related terms often coded RT and use for other kinds of semantic relations than synonymity (USE; UF), homonymity (separated by paranthetical qualifier) , generic relations and partitative relations (BT; NT). Related terms may, for example express antagonistic relations, active/passive relations, causal relations, locative relations, paradigmatic relations.
- Synonymy (A denotes the same as B; A is equivalent with B).
- Temporal relation: A semantic relation in which a concept indicates a time or period of an event designated by another concept. Example: Second World War, 1939-1945.

Concepts and semantics should be related to the concept of “literary warrant” (or other kinds of warrant). The principle of literary warrant implies that decisions to include a class in a classification, to define a class (or concept) and to relate classes/concepts should be based on the scholarly literature. Although this principle is widely accepted and followed (e.g. in the DDC), it is not often discussed how this should be done concretely. Often there is conflicting evidence in the literature about the meaning of terms and their relations to other terms. How should decisions then be made?

To establish the basis of a KOS is not a simple task. The point of view of domain-analysis is that in every field of knowledge exist different views, approaches, “paradigms” or whatever you prefer to name them. Each of those views operates with different theories, concepts and semantic relations. The implication is that we in knowledge organization often have to face different views on how the domain should be organized. A good paper about this is Ørom (2003) in the field of Arts. He demonstrates that different KOS (like DDC, UDC and so on) reflect different views of art. Although some kinds of KOS (e.g. thesauri) are more flexible and easier to adapt to different views, there are no way to escape the condition that all KOS have some kind of “bias” toward one or another view. Bias in structure of KOS should, however, often be considered a

good thing in that it reflects the interests and concerns of the collection and the user group, and gives them priority.

Professionals in KO should be able to "read" such bias (at least in some domains). This can be done if students work within a domain in which they are interested or have special knowledge. This perspective also invites to collaboration between specialists in KO and, for example, cultural studies. Many schools of LIS have specialists in literature, art, music and other fields, and KO should not be developed or taught in isolation from such people.

KO in different domains

The teaching of knowledge organization should include examples of KOS from Science & Technology, Social Sciences, Arts & Humanities and other fields. Papers such as Ørom (2003) and Abrahamsen (2003) could, for example, be used to demonstrate problems and realities in the organization of knowledge in arts and music. A book like Ereshefsky (2000) may be used to illustrate problems in KO within biology etc.

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8 The Library in the Multi-cultural Information Society

Ragnar Audunson
Marta Brunelli
Anne Goulding

Introduction

In our everyday language, multiculturalism is generally linked first and foremost to the movement of immigrants from developing world countries to Europe. This development probably creates the most urgent multicultural challenge our societies are facing, but multiculturalism is more than just this and today we are also faced with cultural gaps between generations and between social and educational groups. European national also still face challenges associated with the presence of ethnic and cultural minorities with a long history in our countries: minorities fragmented in several state-nations like the Sami/Lapps living in Norway, Sweden, Finland and Russia or the Basque people in France and Spain (indigenous people or nations without their own independent state); national minorities like Macedonians living in Albania, Greece, Bulgaria, Serbia-Montenegro and Macedonia, etc.; linguistic minorities in traditional border areas such as Switzerland (Ticino and Grishun cantons), or the Italian border zones (Aosta Valley, Alto Adige/Südtirol, Friuli-Venezia Giulia and so on); and finally other minorities who have lived in many European countries for centuries such as Sinti and Romany (gypsies) or Yiddish people. Multiculturalism, then, describes a complex reality.

Basic concepts

In order to better locate and to weigh up the significance of the topic under discussion, we should clarify in a preliminary way some basic concept, all the more so because they have been developed in disciplinary fields far from LIS[1] (see appendix for more extensive explanations of terms used).

Diversity = quality or condition of who or what is diverse. In the sociological and psychological fields, diversity can be considered in a positive light as a point of reference since it strengthens the identity of an individual or a group as different from others. The positive meanings of diversity are the founding principle of identity.

[1] Other concepts in *Dizionario della diversità* (2004) and its English version: *Dictionary of Race, Ethnicity & Culture* (2003).

Identity = from a psychological viewpoint, identity consists of a set of features of an individual (physical, psychological, social, moral, cultural) remaining constant during changes, ages and experiences of life.
Ethnic Identity = even though the concept of ethnicity is still ambiguous in ethnology, anthropology and sociology, ethnic identity can be identified in the collective awareness by a group of its common heritage i.e. history, origin and, if possible, the link to a territory (although this is not a pre-requisite).
Cultural Identity = represented by the cultural heritage that distinguishes or joins human groups (behaviours, values, customs, language, etc.). Since each individual can belong to several groups, his/her cultural identity can consist of several different cultural belongings (including an ethnic one).
Minority = the concept of minority is linked with both the concepts of majority and of identity. The definition of minority, according to public international law (although not binding and not officially accepted yet), means a group of citizens, numerically inferior to the rest of the population, with different ethnic, religious or linguistic characteristics and who wish to preserve their own culture.
National minorities and Ethnic minorities = as described above, in the law field the minority is a comprehensive concept, a scale containing mixed typologies and whose extremes are represented by autochthonous minorities and "new" minorities i.e. immigrants. The sociological literature calls the secondary ones, *Ethnic Minorities* whilst the primary ones, *National* (or *Linguistic*) *Minorities*, i.e.: "indigenous or long-established groups with a long-standing and distinct ethnic, linguistic or cultural identity, distinct from that of the majority"[2].
Culture = the *Universal Declaration on Cultural Diversity* (2001) reaffirms that culture is "regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyle, ways of living together, value systems, traditions, and belief."[3] The traditional concept of culture (based on territory, proximity, homogeneity) is nowadays inadequate because of globalization that emphasizes the interaction between cultures. So, the use of prefixes (multi, inter, trans, etc.) creates new meanings.
Multiethnic society = diverse ethnic groups that happen to live together in the same territory in a given historic moment, for example, in the multiethnic state of ex-Yugoslavia created in 1918. Also a feature of modern societies as a consequence of migrations. A multiethnic society is always a multicultural society.
Multicultural society = several different cultural groups living together. Since cultural diversity depends not exclusively on ethnicity, a multicultural society is not necessarily multiethnic. Both in multiethnic and multicultural societies, life together is based on the respect and recognition of the inalienable rights of each others, but in practice it can produce a simple, non-belligerent coexistence of different groups that do not communicate with each other (*static concept*).
Interculturalism = an analysis category which is not descriptive but related to planning, i.e. it implies the attitude, the will or the process of engaging cultures in communication. In an intercultural society diversities interact, accepting one another with reciprocal learning and mutual exchange (*dynamic concept*).

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[2] IFLA (2002).
[3] Unesco (2001); see the first definition in: Mondiacult (1982).

Transculturalism = a word with different meanings. Transcultural is everything that - apart from individual and cultural diversities - is psychologically universal in the human race, such as ideas, feelings, emotions and creativity. But transcultural can also refer to all those new cultural knowledges and models resulting from the contact, transformation and evolution of cultures, showing the transitory nature of culture in the globalization dimension.
Cross-cultural = the kind of approach where diverse cultures are analyzed, in a "longitudinal" way, with regard to the same problem (or event, or issue) in order to detect convergence or divergence of representations, behaviours, beliefs, etc.

The library has roles to play in relation to several of the definitions above. Historically, it has focused on the multicultural dimension by providing literature, newspapers and other resources for different cultural and ethnic groups, and on integration by providing, for example, community information services in different languages. We also have some examples of intercultural activities, for example exhibitions or festivals celebrating the cultures of specific groups in the community, projects where different groups present their background to each other, visits of authors from different cultural backgrounds, cross cultural reading groups etc. The library space could also be a vehicle for intercultural activity by providing the environment within which individuals from different cultural backgrounds can meet, encounter one another and communicate although this is essentially a passive form of intercultural promotion.

If we accept that the library has a role to play in the promotion of multicultural and intercultural activities, then those entering the profession must have the understanding, awareness and skills to facilitate them. The rest of this chapter will explore the origins of multiculturalism and how libraries have responded, the challenges they face and how we feel the LIS curriculum should evolve to adapt to the multicultural and intercultural society.

Multiculturalism then and now: from the moulding of one culture out of many into accepting plurality

The “multicultural origin” of the public library

Multiculturalism is not a new phenomenon. In fact, one can say that public librarianship is a child of multiculturalism. When the idea of modern public librarianship was born in the US and UK more than 150 years ago, diversity was an important sub-theme. The influx of millions of immigrants to the US created a need for introducing them to the American political culture – creating US citizens out of people with diverse national and cultural backgrounds. In the UK, the industrial revolution created a burgeoning urban population with migration from the countryside into the industrial centres and towns. The threat of unrest caused by the inhuman conditions in many places prompted the middle classes in parliament to search for a way of turning the masses away from radicalism and educating them in the dominant liberal political philosophy. Creating an educational and cultural arena capable of transferring the skills, competences and values necessary when society was changing to a predominantly industrial economy and culture as opposed to an agrarian one was therefore an important impetus behind the idea of modern public

librarianship (Harris, 1989). The public library, then, as a meeting place with an integrating potential in a period of profound cultural, demographic and social change was an important part of the background of the very idea of public librarianship.

The issue in this phase of multiculturalism, however, was not one of tolerating and stimulating pluralism. The goal of public libraries was to be instrumental in integrating immigrants – be it immigrants from different nations and cultures or immigrants from rural cultures into the economy and culture of the industrial society – into the dominant culture. Public libraries were linked to the rational project of enlightenment. Enlightenment, in turn, is based on the conviction that in the fields of culture, literature and knowledge, one can distinguish between products of high value, which the library should promote, and products of mediocre or low value, which the library should not promote.

In the decades after 1945, public librarianship in most European countries developed within a context that, viewed through the lenses of today's rapid change, can be described as mono-cultural and as relatively stable. Although Western and Northern Europe experienced an unprecedented growth and the construction of the modern welfare state, cultural, social and demographic relations were relatively stable. Norway, Denmark, Sweden, Germany, the UK etc. were first and foremost inhabited by Norwegians, Danes, Swedes, Germans and British people, speaking the same language and sharing the same culture, with demographically small exceptions such as the Welsh speakers in rural Wales. The cultural and ethnic minorities we did have, e.g. the Romany (gypsies) or the Lapps, were suppressed and made more or less invisible. The primary task of the library was related to giving people access to culture, knowledge and leisure contained in, first and foremost, printed information carriers, although audio-visual material started to supplement printed documents. It was the dominating, bourgeois culture that should be promoted.

The cultural and multicultural revolution of the 1960s and 1970s

In the sixties and seventies, however, a range of developments signalled and anticipated the coming of the multicultural society as we know it today. Among these were:

- The culture of teen-agers and youngsters started to evolve and institutionalise itself as an independent field of cultural expressions. Until then, one had cultural cleavages according to social class, e.g. working-class culture as opposed to the bourgeois culture. Young people belonging to either of the social classes, however, shared cultural values with their parents. The sixties saw a cultural diversification in the evolving of an independent youth culture with its own music, fashion, codes of conduct and behaviour.

- Many started to question the existence of a canon that everyone ought to know in order to be a cultured and well-bred person and which it is the role of the library to promote and spread. Libraries have traditionally been linked to the modern project of enlightenment. According to this project, as mentioned above, one can distinguish between truth and non-truth and between cultural expressions of high

and low quality. Something is true or, at least, approaching and promoting truth, something is untrue. It is the raison d'etre of the public library to promote *knowledge* at the expense of ignorance. Shakespeare and Goethe are of a higher value than Danielle Steele. It is also the role of the public library to help people experience literature and other cultural expressions of high quality at the expense of trivialities. Access to knowledge and culture was supposed to refine and elevate people and institutions like universities, schools and libraries were there to produce, organise, provide access to and promote knowledge and culture. According to McCabe (2001), the radical youth movement of the sixties and seventies cut itself loose from the enlightenment project. Instead, it found inspiration in what he terms expressive romanticism. No teacher or librarian should try to tell people how they should live their lives, including what they should read, listen to or watch. It is up to each and every person to decide what is valuable in his or her life. People should be given space to realise themselves and there is no canon that can tell people how that can be done. According to this philosophy, the role of the library is to promote self-realisation by being a cultural animator and by giving people access to a diversity of expressions, not to make judgements and selections. Thus the librarian changes from a guide helping people finding the *right* way in the world of knowledge and culture, selecting the good from the bad, into a navigator helping people find whatever they might ask for in a world of information and cultural expressions where everything is of equal value. This process added to the growing multiculturalism of western societies. The hitherto dominating high culture was taken down from its pedestal and placed on an equal footing with other cultural expressions.

- On a more practical note, mass immigration beginning after the Second World War also changed many societies' attitudes towards their own cultures and those of other peoples. At the end of World War Two, people displaced by the war often wanted to begin a new life for themselves in a new country which did not hold unhappy or distressing memories for them. At the same time, many European economies were looking to actively recruit foreign workers to resolve domestic labour shortages and to help with economic reconstruction. Initially, the migration trend was from southern and eastern European states such as Poland and Italy to northern states such at Britain and France. Colonialism also created an effective channel for migration movements after the war. European states such as Britain and France could call on a potential workforce from many countries in the African continent, from the Caribbean or from the Indian sub-continent. Many men from the West Indies, for example, had fought for Britain during World War Two and now turned to "the mother country" in the hope of a better life, encouraged by their sense of patriotism and adverts for work. Immigrants into Europe did not always receive a warm welcome but their impact on the life and society of their new homes was far reaching. While some have argued that the cultural baggage that immigrants bring with them is destructive of indigenous cultures and ways of life, others have recognised that the different values, attitudes and practices immigrants possess actually add to cultural capital by

extending cultural awareness and helping develop new tastes, understandings and appreciations that enrich people's lifestyles.

The multicultural dimension of post-modernity

After the independence of the colonies, the collapse of communism, the awakening of nationalisms and ethnicities, the growing attention to minorities, the newly globalized and increasingly connected society and the increasing immigration from non-Western cultures, the process of multiculturalism accelerated immensely and took on a new depth and direction. With mass immigration, a new and more fundamental dimension was added to the problematic issue of the library's traditional role of promoting one cultural and scientific canon. This new dimension is not, first and foremost, related to a liberal ideology according to which people should be allowed to pursue their own interest and values. Democratic values and considerations based on tolerance are just as important. Gradually, those representing the culture of the majority started to question the former policy of promoting their own cultural values at the expense of minority cultures. Is it not more in harmony with the values of democracy and tolerance to offer linguistic and cultural minorities as many opportunities as possible and the appropriate conditions to cultivate and celebrate their original culture? To the extent one answers yes to such a question, the role of the public library changes fundamentally from that which it played in the multicultural melting pot in which public librarianship was born. The European Project, aiming at mobility and harmonization whilst preserving diversity, also poses multicultural and intercultural challenges, Europe being a multilingual and multicultural continent. If one is to realize the goals of creating one European educational space, that presupposes cultural flexibility from students as well as teachers. Mobility, in general, places new demands on public libraries.

But at the same time as accepting and promoting multiculturalism represents a leap forward as far as democracy and tolerance is concerned, it also highlights a democratic problem. Democracy, understood as a society based on broad public participation and as a society where one reaches collective decisions based on public deliberations, presupposes a degree of cultural *community*. How can one promote that critical degree of cultural community at the same time as one promotes and stimulates diversity and multiculturalism? That is the challenge of today's society and, thus, for today's libraries. For LIS-education, the multicultural challenge takes on several forms:

1. Multiculturalism is a general condition under which librarians of today perform their work as professionals. In a multicultural society, being competent in multicultural communication is of vital importance. That is valid for all dimensions of library work. How should this general condition affect LIS-curricula from reference work via classification and indexing to collection development?
2. One of the roles of libraries is to give different cultural groups the opportunity to survive linguistically and culturally and to develop services specifically tailored to the information needs and barriers of specific groups. In addition to the general ability to communicate in a multicultural context, librarians need specific

qualifications that can make them capable of functioning with relation to the specific needs of ethnically and culturally defined groups.

3. The third challenge relates to the library's role as a meeting place that can facilitate cultural integration and community. How can libraries contribute to the integration of different cultural groups in society? How can they promote that critical degree of cultural community at the same time as promoting and stimulating diversity and multiculturalism? That is also a challenge for European LIS-education.

Competences of the librarian in the multicultural context

To date, these challenges are poorly reflected in LIS-curricula. The authors of this chapter have made a small survey in the regions where they work, i.e. the UK, the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) and Italy, but also Spain, France and Central European countries (Bulgaria, Croatia). The specific courses in multicultural work that have been developed so far, are all optional. And although many schools maintain that they try to integrate the multicultural dimension in their ordinary courses within core subjects in LIS, they also admit that we still have a long way to go. So far, in the UK, the Nordic Countries and in Italy[4], a specific curriculum for multicultural librarian facing all educational needs linked to particular professional issues (from general to technical, from multicultural communication to cataloguing, from indexing to reference and collection development, to multicultural events management) does not yet exist. There is no reason to believe that the situation is radically different in other European countries. In this field, LIS can learn from other social sciences such as pedagogy, where an approach to intercultural and migration pedagogy has been developed.

In order to meet the challenges outlined above, librarians need competences on the following three levels. They need to be able to:

1. Understand and advocate the role of the library in the multicultural context
2. Develop awareness of methods and approaches for multicultural and intercultural work
3. Design and deliver services aiming at realising the library's goal in the area.

Each of these will now be explored in detail.

Competences for understanding the role of the library in the multicultural context

Since the topics above mentioned are essentially new in the LIS field, in order to try to define the competences of the librarian in the multicultural context it could be helpful to analyse all the possible needs of the *stakeholders* as defined by Brophy et al. (1998),

[4] Baldacchini, L. (2004) "Lo staff multietnico e la preparazione universitaria", in: "Lo staff multietnico in biblioteca." (2004).

considered from a multicultural point of view. The possible stakeholders involved, i.e. all individuals/groups interested in LIS learning and responsible for testing curricula and assessing their capacity of meeting several professional requests, include:

1) Society as a whole;
2) Governments, local councils and other agencies developing policies and strategies for immigration and integration;
3) Academic institutions involved in delivering effective learning;
4) Employers (public bodies, organizations, etc.) that need qualified staff skilled in multicultural issues, with attention to the mission of each kind of institution involved and the services provided.
5) Representatives of different cultural, linguistic and ethnic groups.

Librarians need to develop strategy and plan services with sensitivity to the multicultural context. This involves a range of competences and understandings, that we could classify – according to the stakeholders above mentioned – as follows:

1. Society as a whole requires learned citizens, capable of facing learning and information challenges, rapid social changes and multicultural transition:
   - Understanding of multicultural and intercultural concepts in order to comprehend how cultural, social and linguistic barriers can affect the minorities' use or non-use of the library;
   - Community profiling or analysis: to apply social research methods to collecting information and data about the library's community with regard to cultural issues (mapping of the territory and social context: heterogeneity, social changes, presence of visible or invisible minorities, migration trends, etc.);
   - Needs-based service: to be proactive towards different patrons and ready to provide services and programs that they really need through analyzing information (collected through community analysis, use and non-user satisfaction surveys, etc.) and using that as guidance for making decisions, planning new services or redefining existing services;
   - Consultation: marketing, outreach work and consultation are advocated as ways in which libraries can find out more about the needs of the community and specific groups within it, involve them in service planning and development, explain and publicize the services offered and enhance their democratic legitimacy. Libraries have been criticized in the past for consulting only those who use their services, through user surveys, for example. This can reinforce the status quo as users tend to ask for more of what is already provided which clearly does not meet the needs of non-users. Librarians need to be able to make contact with, and connect with, those hard to reach groups who do not use libraries, with the aim of helping staff engage more closely with the needs of specific groups within the community and increase their confidence of services.

2. Governments and policies with regard to immigration, integration etc.
   - Knowledge of government (European, national and local) policies and priorities, laws and institutional resources to plan interventions and programs
   - Communicating policies to stakeholders including advocacy, i.e. providing evidence to stakeholders and increasing their understanding of how libraries can help them meet their policy objectives with regard to immigration and integration.

3. Employers and mission of each institution
   - Vision/mission in diverse kinds of institutions (e.g. public and/or school libraries, documentation centres, often connected to public relations offices, welfare services, etc.) of preserving and promoting cultures, avoiding under-representation of national, linguistic, ethnic minorities, promoting intercultural dialogue, etc.
   - Developing library service policies/strategies according to cultural services (exhibitions, conferences, lectures etc.), educational services (access to appropriate resources including literacy services), informational services (community information, health information, migrants rights, etc.)
   - Co-operation with other libraries and other agencies, or cultural and immigrants associations, etc., in order to build networked multicultural services

Develop awareness of methods and approaches for multicultural and intercultural work

Understanding barriers to use. Librarians need to be aware of the many barriers to using libraries which may prevent some cultural or ethnic groups from taking full advantage of the resources they have to offer. *Libraries for All* (Department for Culture, Media and Sport, 1999), highlighted the library's role in establishing and sustaining the flow of information within excluded groups and communities and in providing access to ICT for personal and community development. Concerns were also raised, though, about those who do not use libraries and a range of obstacles was listed which prevented their socially inclusive use including institutional barriers such as restrictive opening hours, unnecessary rules and regulations and inappropriate staff attitudes and behaviour; personal and social barriers such as lack of basic skills, linguistic obstacles, lack of confidence and poverty; perceptions and awareness causing difficulties for people who do not think libraries are relevant to their needs or who do not know about the facilities and services and how to use them; and environmental barriers including poor transport links, isolation and difficult physical access. Roach and Morrison (1998) suggested that ethnic minority communities often experience disadvantage and discrimination in access to public services such as libraries because of their nature, size, traditions and modes of operation and, like many other public services, the library is "representative of the dominant social institutions which have traditionally excluded and oppressed ethnic minority groups". This kind of institutionalised racism can only be addressed by changing the culture of the organization but, at the moment, many Black and minority ethnic groups feel they have no stake in the library service. The experience of these kinds of

personal and social barriers can lead to the formation of a general perception that libraries are "not for the likes of us". Those without a tradition of using library services may feel intimidated by the environment and the experience of the public library. Roach and Morrison (1998) found that the library was not culturally relevant for many minority ethnic groups, for example, and also suggested that ethnic and youth cultures can shape perceptions about the relevance and value of the library. By understanding the kinds of barriers to use which exist and their nature, librarians can hopefully start to address them through policies and strategies aimed at making library services more socially and culturally inclusive.

Methods and techniques for intercultural communication. Librarians working in a multicultural context need to develop an ability to analyse, identify and be sensible to cultural differences. That goes for all kinds of library work. Ragnar Nordlie analysed user/librarian communication in reference interviews in a public library context. (Nordlie, 2000). A central concept in his dissertation is "user revealment". User revealment is a process. People usually do not burst out with their specific problem situation, thus their information needs, in the opening stages of a communication situation. That is too personal. They reveal their problem-situation, and thus information need, gradually. One of the tasks of the librarian performing a reference interview is to promote this gradual process so that the information needs of the user in question can be met. But user revealment is probably dependent upon the user's cultural background. A female Moslem immigrant from Pakistan and a university educated young woman with a Western background probably differ in this respect. A reference librarian of today has to be able to communicate with both, based on an understanding of and a respect for the cultural background of different users. If you view everything from your own cultural position (ethnocentrism) what you perceive when meeting people from other cultures is a distorted picture of yourself. You will not be capable of understanding that completely different perception of the world are possible.That will efficiently block communication. (Dahl, 2001, pp28-29). The answer is for the librarian to develop an ability to place herself/himself in the position of the other – to see the other "from the actors point of view", to quote the anthropologist Clifford Geertz. (Geertz 1973, quoted from Dahl 2001). Then a positive and fruitful communication can be established.

To develop such abilities takes theoretical study, e.g. in anthropology and communication, as well as practical exercises. The competencies developed will be useful in all kinds of reference work. It will, for example, enable librarians working within classification and indexing to be open for cultural biases in the classification and indexing systems used. It is also a precondition for communicating efficiently within a variety of activities ranging from the promotion of reading via reference work (in a public library as well as an academic library context) to measures aimed at promoting information literacy.

Intercultural pedagogy can supply methods and competences too, especially concerning multicultural children's literature and educational communication in a multicultural context. These kinds of competences are useful whenever an educational relationship takes place in the library e.g. in a one-to one relationship in bibliographic orientation or reference session, or one-to-many relationship in library instruction, user education, etc.

A course in multicultural understanding and communication should, therefore, be compulsory in all educational programs.

The library and social inclusion. One perspective that might be useful in multicultural library work aiming at preventing social inclusion and empowerment might is legitimate peripheral participation (LPP). This is a concept originally developed within the field of knowledge management (Wenger, 1998), but also used by social workers in empowerment work. LPP is based on the relatively intuitive fact that a person who is new to a group, a community or a work-place cannot be expected to participate fully from day one. A person starting as an apprentice in a hairdresser salon will start with the peripheral activity of sweeping the floor. Such peripheral activities are necessary to integrate the person in question fully into the professional community. Communities of practice, which are central to the practice of knowledge management, should also be open to the ideas of LPP. The same logic can be applied to an immigrant into a local community or a person in danger of being marginalised. He or she cannot be expected to participate fully from day one. Integrating channels opening the possibility of LPP are needed. The public library is probably as close as one can come to an institution ideally designed for such a role. It is an institution firmly anchored in the local community. Using the library means a degree of participation in the community. The public library is an arena open to different degrees and levels of participation, from sitting in the newspaper corner watching the activity of the library to more intense participation in groups and activities organised by the library, e.g. literary groups or Internet groups. Cooperating with different organisations and institutions in the community, the library might also be a channel to other activities, e.g. from the library to the youth club, the local art club, local schools, local political organization, the local choir etc. If the library is to fulfil such a role, the staff has to be educated in relevant methods and strategies. Teaching LIS-students empowerment work and methods and strategies in such work such as LPP should also be a part of LIS educational programmes in multicultural communication.

Sensitivity for the cultural and epistemological presuppositions of LIS. Libraries work with knowledge. They structure and organize knowledge via classification schemes and indexing systems. Such systems are not culturally neutral or epistemologically self evident. They represent social constructions of reality based upon, usually, Western cultural and epistemological presuppositions. In today's multicultural world it is vital that librarians develop a consciousness and sensitivity towards this, also in order to be able to develop and critical attitude to and transcend present practices. Epistemology and cultural studies, either as an integral part of knowledge organization or as compulsory, independent courses, are vital in developing such a critical and sensitive attitude.

Interacting in socially heterogeneous groups. In a multicultural context, the librarian should possess the competence of interacting in socially heterogeneous groups, as defined by the OECD 2003 study *Key Competences for a Successful Life and a Well-Functioning Society*.[5] This competence is made by three sub-competences: [1)] to relate well to others; [2)]

[5] After the OECD 1997 international programme PISA (*Programme for International Student Assessment*), it was clear that students' success in life depends on a range of competences wider than skills in the areas of reading, mathematics,

co-operate, work in teams; [3)] to manage and resolve conflicts. Having good interpersonal relationships with people from diverse social and cultural background is crucial in pluralistic and multicultural societies and the library's territory, patrons, collections and staff should reflect this dimension too. Librarians need improve this competency in order to manage personal relationships both with their colleagues and their customers. In the first case, they should be able to cooperate with professionals coming from diverse ethnic and cultural groups (minorities) or from different cultural contexts and LIS traditions (the consequence of European mobility, perhaps); in the second case, they should be able to work with the library's own global local patrons, to facilitate intercultural dialogue between groups and to prevent cultural conflicts.

Design and deliver services aiming at realising the library's goal in the area

Collection development and access to resources. The importance of ensuring that the library's collections are relevant for all those in the community who wish to use them seems clear and many libraries have a long history of developing collections which carry materials in a range of community languages and others in the language of the host nation which reflect the history, traditions and cultures of different community groups. When deciding which languages to cover and what kinds of resources to include (including fiction and non-fiction books, magazines, newspapers, films on video or DVD, music CDs, Internet resources etc.) librarians must take the needs of the community into account first and foremost by using a range of the techniques discussed above. It is especially important to keep management information, such as community profiles, up to date to ensure that the needs of newcomers as well as long established communities are catered for. The identification and selection of stock for different ethnic or cultural groups can be difficult and time consuming. Library suppliers are generally good at supplying mainstream material but librarians working with excluded groups often have to find other ways of meeting their specific needs. There are specialist suppliers in some countries, for example CILLA (The Co-operative of Indic Language Library Authorities) in the UK, but personal contacts, recommendations and strategies such as Internet searching are also important for sourcing suitable material. Co-operation between library authorities is another important way of improving coverage of various community languages. Involving the refugee and asylum communities is key to ensuring stock is relevant and involving community representatives in stock selection can result in a book stock which better reflects the needs of the local community. Another method of making the stock more relevant for excluded groups is to involve communities in actually producing material by gathering stories from different cultures and generations and makes them available to a wider audience. Developing and maintaining a relevant collection requires an openness of mind and a willingness to share the perspectives of different cultures. Cultural competence or awareness is essential in these circumstances

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science and problem solving. The result of that process was the OECD *DeSeCo* (*Definition and Selection of Competences: Theoretical and Conceptual Foundations*) with its assessment of new competences for a successful life and a well-functioning society. The three key-competences (called competences because they cover knowledge, practical skills and psychosocial resources such as attitudes, motivations and values; key-competences, since they are transversal and should apply to multiple areas of life) detected by the 2003 OECD study are: [1)] using tools interactively; [2)] interacting in socially heterogeneous groups; [3)] acting autonomously.

and requires a flexible attitude and a willingness to respond positively to others' cultural norms and expectations. Facilitating access to the resources acquired the library through effective bibliographic control is also an issue that requires thought. The IFLA Guidelines for Library Services to Multicultural Communities recommends that cataloguing standards should be consistent across the library's collection and that, where possible, records should be in the original language and script[6]. Librarians also need to consider the ethnocentricity of standard classification and cataloguing systems which have evolved out of Western traditions of thought and the organization of knowledge; these may not be relevant or logical for those from different cultures[7].

Intercultural projects and programmes. Many libraries have implemented projects and activities specifically aimed at intercultural and anti-racism education for children, young people and adults. Intercultural projects, events and promotions are expressly organized to enhance the culture of minorities, e.g. with thematic exhibitions and festivals (music, poetry, etc.) or celebration of traditions (Chinese or Tamil New Year, Diwali festival, the sacred month of Ramadan etc.). The mutual understanding and breakdown of stereotypes can be achieved through conferences and meetings about multicultural topics and cross-cultural analysis (e.g. the representation of women in different ages and societies). But also, the promotion of the knowledge of the politics, history and culture of the receiving country is important to understand their impact on both autochthonous and minorities (linguistic or different ethnic groups) people. Effective intercultural projects can only be managed by actively involving all communities through their representatives and organizations. This demands relational and communication skills to build intercultural networks around the territory of the library. Among intercultural activities we can also count activities included in the general name of *reader development*, such as children's services, reading groups, author visits, defined in a multicultural context.

Children's services. After building a collection of books and material reflecting several cultural identities (the *structure*), it is important to implement an intercultural programme involving aims, processes and activities (the *function*) necessary to guide children to use those materials. So with each type of material[8] there is a corresponding related educational aim and intercultural activity to be held, in cooperation with schools, teachers and intercultural educators, as follows:

- both immigrant and local children can be helped to know diverse cultures by developing curiosity or stimulating the imagination with work with popular material about foreign cultures and/or fairy tales, legends, stories, novels from other countries;
- the reception process can be facilitated by improving the linguistic skills of immigrants, linguistic minorities and local children, with work on original/native language books, dual language books, multilingual material and other aids (grammars, dictionaries, conversation manuals);
- for second-generation immigrant children, learning the native language can lead to the discovery of their ethnic identity, by reading immigration stories as well.

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[6] IFLA (2002)

[7] There is a number of useful guidelines to collection development for multicultural library services including, IFLA (2002) and Libraries and Archives Canada (2005).

[8] List of materials drawn up according to the classification of Vinicio Ongini (1999).

> Comparing immigration with emigration stories can help local children to comprehend their own origins and at the same time to identify with foreign children's situation and vice versa.

These kinds of activities should involve immigrants as cultural mediators, e.g. parents and especially mothers can play an active role in the reading of fairy-tales and storytelling, in multilingual readings and in managing multicultural events for children.

Reading groups. Through combining multiculturalism with reading group activities, an understanding of multiculturalism can be promoted e.g. focusing the work on specific authors, books and themes directly or indirectly linked with diversity and multiculturalism; or building readers' circles with people from different ethnic groups, cultures, ages, sex, etc. Apart from the aims (exploring a different culture or enabling people to accept and appreciate differences and similarities between cultures; building new ties of friendship between diverse groups living in the territory; promoting reading skills in migrants or helping them to learn a second language, etc.), the work of the reading group should be managed by an coordinator skilled in communication, group management and intercultural misunderstanding and conflict management, but also in education. In fact, the group can become a complete cognitive laboratory where resources of each component are shared as a global heritage, increased through relationships and collective learning. At the end of the reading, a final activity can be organized to strengthen the message of the book and reinforce the work of the group, such as a public lecture on the topic, the screening of a film adaptation of the novel or an author's visit.

Author visits. Authors' visits usually have a positive impact on readers' curiosity and their motivation to read and to write, so this initiative can play an important role in a multicultural context too. Selecting authors, topics and books (foreign and migration literature) can promote reflection about the globalization of cultures and people, whilst fostering family literacy or introducing the topic of diversity in families' discussions at home if the audience is made of children and parents. Again, planning writing activities of smaller groups that meet the author can encourage learners to explore their personal writing processes, stimulating fluency and comprehension especially in minority people, often troubled by linguistic gaps. Skills in projecting, management of cultural events, institutional relations and cooperation with schools, educational agencies and migrant associations are, once more, required in the multicultural librarian.

Community information services. Community information services adapted to the needs and situation of different cultural, linguistic and ethnic groups are important elements in multicultural library services. It is important from the perspective of integration and social inclusion, from the perspective of developing civic skills and social and political participation and from the perspective of people's ability to claim their social, economic and legal rights. Courses aiming at developing the skills needed for such services should focus upon:

- The capability of investigating and identifying information needs in different situations and contexts.

- The capability of investigating and identifying barriers to information use, e.g. linguistic skills, ICT-literacy, knowledge about the new society, self efficacy.
- Knowledge about the effect of different methods in library work in overcoming barriers and the capability of designing and implementing measures aiming at overcoming barriers to use.
- Intercultural communication skills
- Develop web sites and portal conveying community information adapted to the linguistic situation of the immigrant population and taking into regard the taken for granted knowledge about social and institutional conditions that the national population will have and that might exclude newcomers from understanding the information lest the taken for granted elements are made explicit..

As for analysing and identifying needs and barriers the research and literature on information seeking in context represent a rich source for developing a curriculum. We probably have less systematic knowledge about the effects of measures aiming at overcoming barriers[9]. Here the LIS community faces challenges as for generating and summarizing research.-based knowledge that can be integrated into courses. Such courses should be optional.

Information literacy.

- Cultural and social literacy, i.e. the capability to read and understand the cultural norms and values of the new country and community that the national population take for granted.
- Political and institutional literacy, i.e. a basic knowledge of the political and institutional set up of the new country which is a precondition for reading and understanding newspapers, understanding news programmes on television, and for social participation and which also is taken for granted by those with a history in the receiving country.
- Developing linguistic skills by providing adapted and easy to read material in the receiving country's language and by organising groups where learners can use literary texts as the point of departure for conversations and oral training.
- Providing courses in the use of ICT, from the most basic level to more advanced information seeking on the Internet.

Developing and delivering such services also presupposes the ability to place yourself in the position of the other in order to see and reflect upon that which we take for granted, i.e. cultural sensitivity, as well as an ability to perform cultural analyses. Identifying barriers to information literacy, i.e. user studies will also be an important competency as will the ability to communicate on an equal footing with immigrants representing a wide spectrum as far as literacy is concerned, from the illiterate to those with university education. Courses focusing upon information literacy in a multicultural context should ideally be an option in all educational programmes.

[9] Forsetlund (2004) tested out the effects of library interventions to overcome barriers confronted by community doctors in using research-based information in their daily work. She used a systematic randomised research design. The effects of the interventions on the information use of this highly resourceful group were negligible.

Conclusions

The multicultural librarian and the Bologna process

"Multicultural librarianship" courses/modules could be provided within LIS programmes both at first and second level of university programme, with differences in aims and objectives.

A. **First cycle/Bachelors level** = each information professional should be in possession of general competences related to multicultural communication as an general framework for librarians' work. In fact, to communicate with the people of different cultures (i.e. different social groups, generations and finally ethnic groups) is part of the ordinary tasks of all librarians in every kind of library.

B. **Second cycle/Masters level** = a deeper awareness of multicultural heritages and sensitivity to the diverse information needs of multiethnic and multicultural populations should be the target of the second (Masters level), aiming to produce more qualified information professionals able to face complexity and challenges with innovative solutions.

C. **Lifelong learning** = as emphasised by the Prague Communiqué (2001), lifelong learning is one means of improving competitiveness and employability but also facing rapid technological, economic and social changes such as the new multicultural society. Just in connection with the multicultural topic, LIS programmes could offer alternative learning paths to standard qualifications, such as non formal learning opportunities (on line education, distance education, adult education) and recognition of prior learning (also experiential learning) in multicultural services. This can provide the right integration of multicultural academic and professional competences acquired on the job, and widen the access to higher education for a wider range of learners (e.g. part-time students or professionals wishing to improve their working position; unemployed wanting to raise their level of employability on the labour market; etc.).

The library in the multicultural society: rethinking the mission in a changing world

As a professional equipped with the above mentioned skills, academic and professional competences, methods and approaches, the multicultural librarian should be able to make the whole library become an environment where everybody feels welcome and included despite differing values, beliefs, histories or cultures. The library in the multicultural society can become a place where new social and cultural bonds between individuals are built, replacing those bonds becoming weakened by a fragmented society, and allowing everybody to take advantage of the resulting social capital, social cohesion and social networks.

Robert Putnam, speaking to the OECD Education Ministers in 2004, stressed how social cohesion is becoming the most important resource in society. Nowadays, the loosening of *bonding social capital* represented by ties within ethnic or social groups (such as family and friends, civic associations or political parties, religious groups and so on), in addition to the increase in social and ethnic diversity resulting from migration, means that new social capital should be developed: the so-called *bridging social capital*. These ties work across social diversities and groups, and are the most difficult to build but, in this meaning, education is pointed out as "the single most important and effective policy lever" (Putnam, 2004: 5) to increase social capital and social cohesion. In this fragmented and "liquid society", as defined by Zygmunt Bauman, libraries, together with other cultural heritage institutions such as museums, archives etc., play the same effective action in community building, through, as discussed above, promoting common values, developing new ideals of membership through participation in activities (exhibitions, readings, films, discussions or lectures), practising freedom of expression for each different voice, experiencing solidarity culture through providing knowledge and learning to everybody. In other words, a community that – respecting and being aware of ethnic and cultural diversity – is based on new bridges and connections between people of different cultures or ages, genders and so on.

In conclusion, to educate a librarian aware of the multicultural issues means to educate a professional aware of the all the above mentioned social issues, and aware of working to build a new community. S/he should be aware that the public library has the goal of preserving knowledge which defines both the predominant culture and all other cultures (minority cultures too). Facilitating the participation in intercultural activities, the library can be a cultural heritage(s) institution (McCook, 2002) and a physical public space (Goulding, 2004) where each culture is respected and preserved, all cultures are democratically in touch, live and learn together, all diversities are recognized and thrive, in order to build a new community based on cultural, intercultural and social networks. A librarian successful in this context is a professional who is aware of his/her cultural, educational and social mission.

Appendix – Brief glossary for multicultural librarians

Diversity = diversity is conceivable as the recognition and self-recognition of a human being and group as different from the others, in psychological and sociological meaning. There are basically "unintentional" diversities, such as inherited diversity, i.e. biological and genetic, historical and cultural (language, religion), or the diversity linked with social roles and status filled in different life cycles (age, disease, parentality, handicap, work, etc.); and "voluntary" diversities, determined by voluntary options that the person can choose, inside or against the context, i.e. the life environment and the frame of meanings, where s/he lives. So "diversity" is linked with the concept of "identity" as its founding principle (see after).

Identity = identity is a polysemic conception, with a different meaning in various contexts, from philosophical to pedagogical etc. In a psychological view, identity means the awareness by each individual of him or herself as unique, and in relationship with other individuals (that are recognized as diverse, or that recognize him/her as unique). It consists of a set of features (physical, psychological, social, moral, cultural) keeping steady during changes, ages and experiences of life.

Ethnic Identity = In an anthropological view, the individual's identity becomes "ethnic" since it links individuals to groups with similar cultural characteristics (language, religion, etc.), even though the same anthropologists are aware that it is an instrumental conception useful to their descriptive needs and still ambiguous. Ethnic identity is deeply-rooted in the collective awareness by a group of its common heritage (history, origin and, if possible, the link to a territory - even though this can be missing); in a more political view, it gains meaning in the conflict with other distinct groups and in the claiming of rights and a favourable hierarchic position.

Cultural Identity = connected with the sociological-anthropological concept of culture as a global evolutionary heritage both of an individual and of social groups s/he belongs to. This heritage is based on the above-mentioned cultural features distinguishing or joining human groups (behaviours, values, customs, language). Cultural identity is a wider concept of Ethnic identity, since it can consist of several different cultural memberships and belongings (including ethnic identity), in continuous and dynamic development consequent of dialectics between individual/group, aknowledgment/differentiation, repect of traditions/freedom of choice.

Minority = the most accurate definition of "minority" comes from public international law in consequence of the first attempt of Francesco Capotorti (1979), but it is not binding so it has not been accepted in any official document yet:

> "A group numerically inferior to the rest of the population of a State, in a non dominant position, whose members - being nationals of the State - possess ethnic, religious or linguistic characteristics differing from those of the rest of the population and show, if only implicitly, a sense of solidarity, directed towards preserving their culture, traditions, religion or language."[10]

The final text of the 1995 "Framework Convention for the Protection of National Minorities" in fact, because of the disagreement of the participating States, contains no

[10] Capotorti, F. (1979): 96, paragr. 568.

definition. After Capotorti, we find it in the "Proposal for a European Convention for the Protection of Minorities" adopted by the European Commission for Democracy through Law ("Venice Commission")[11] of the Council of Europe on 8 February 1991;[12] and then in the Art. 1 of Recommendation 1201 of the Parliamentary Assembly of the Council of Europe (1993)[13]:

> "... the expression "national minority" refers to a group of persons in a State who: a) reside in the territory of that State and are citizens thereof, b) maintain long-standing, firm and lasting ties with that state, c) display distinctive ethnic, cultural, religious or linguistic characteristics, d) are sufficiently representative, although smaller in number than the rest of the population of the State or of a region of that State, and e) are motivated by a concern to preserve together that which constitutes their common identity, including their culture, their traditions, their religion or their language."

National minorities and Ethnic minorities = in the sociologic literature we find a distinction between *National* (or *Linguistic*) *Minority* and *Ethnic Minority*, differently from the law field, where the minority is a more comprehensive concept, a scale containing mixed typologies and whose extremes are represented by autochthonous minorities and "new" minorities i.e. immigrants.

So *National/Linguistic Minority* is a gathering of people sharing common cultural features such as language or religion (for example, people concentrated in a territory, and later absorbed inside a wider state, e.g. the Basque nation in Spain and France, Quebec in Canada, or somehow Ladinos minority in Alto Adige/Südtirol). This leads to so-called *Multinational States* (Kymlicka, 1995) where historical communities, linked to the territory and their own language and culture, live together with the majority and at the same time claim self-government rights with a full and free development of their cultures.

On the other hand the *Ethnic community* is based on the awareness coming from common origins, history and traditions of a group different from the others, as happens in the case of immigrant communities. So the *Pluriethnic State* (Kymlicka) is the same state that, accepting migratory flows, gradually accepts new linguistic and cultural contributions from immigrant minorities that are consequence of their aspirations regarding economic and social integration and the respect of some cultural features.

Culture = according to Cultural Anthropology we can define Culture as everything regarding man and his products such as knowledge and language, codes and rules, values and representations, customs and behaviour, belief, myths and religious practices. As reaffirmed in the *Unesco Universal Declaration on Cultural Diversity* (2001), culture is defined as:

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[11] European Commission for Democracy through Law - Venice Commission, CDL/MIN (93) 6 and 7.

[12] "… the term 'minority' shall mean a group which is smaller in number than the rest of the population of a State, whose members, who are nationals of that state, have ethnical, religious or linguistic features different from those of the rest of the population, and are guided by the will to safeguard their culture, traditions, religion or language." (Art. 2.1).

[13] Adopted in 1993: text of a proposal for an additional protocol to the Convention for the Protection of Human Rights and Fundamental Freedoms, concerning persons belonging to national minorities, in: *Recommendation 1201 on an additional protocol on the rights of national minorities to the European Convention on Human Rights,* 1 February 1993.

> ”the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyle, ways of living together, value systems, traditions, and belief.”[14]

This concept – traditionally based on territory, proximity, homogeneity – is nowadays inadequate because of globalization and connected phenomena (migrations, mobility, circulation of goods, people, knowledge, ideas, etc.) that emphasize exchange and interaction between cultures. From here, the use of several prefixes (multi-, inter-, trans-, etc.) in conjunction with the word culture creates new meanings and conceptions.

Multiethnic society = descriptive category. Diverse ethnic groups happen to live together in the same territory in a given historic moment, for example in the multiethnic state of ex-Yugoslavia created in 1918 and, still, in the countries resulting from its fragmentation; but also in each modern society as a consequence of migration. A multiethnic society is always a multicultural society since each ethnic group is characterized – by definition – by its own culture, with linguistic, religious and cultural features (Croatians, Serbians, Muslims in ex-Yugoslavia) different from the other groups.

Multicultural society = descriptive category of the living together of several different cultural groups. Since the cultural diversity depends not exclusively on ethnicity, consequently the multicultural society is not necessarily multiethnic.

Both in multiethnic and multicultural society, life together is based on respect and recognition of inalienable rights of each other (common individual rights and independent of origins), but actually it can produce a simple situation of non-belligerent coexistence of different groups (*static concept*). Its degeneration can even lead to the isolation of, and incommunicability between, cultures.

Interculturalism = an analysis category which is not descriptive but planning related, in the political and pedagogical fields, that implies the attitude, the will or the process of engaging cultures in communication (so that in the field of communication and education we talk about intercultural relationships and intercultural pedagogy). In an intercultural society, cultural diversities interact without losing their own identity, i.e. accepting and understanding one another and coming to learn one from another, with reciprocal learning and mutual exchange (*dynamic concept*).

Transculturalism = a word with different meanings in various fields and authors. In psychology, the moment of cultural transition is the understanding that everything is psychologically common or universal in the human race, such as ideas and feelings, emotions and creativity, and this creates a “bridge”, apart from the several individual and cultural diversities. But transcultural are all those knowledge and border-line areas that highlight transversal links between cultures and bring about the creation of new cultural models, the result of the contact, transformation and evolution of the old cultural identities. The conception of culture and cultural identity shows its transitory nature in the globalization dimension.

Cross-cultural = kind of approach used in several disciplines (psychology, psychiatry, medicine but also communication, marketing and management), a prospective of analysis of the same aspect or event or problem, that is analyzed and compared in diverse cultures

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[14] *Universal Declaration on Cultural Diversity.* (2001). The first definition is in Mondiacult. (1982).

in a "longitudinal" way in order to detect convergence or divergence, similarity and specificity of representations, behaviours, beliefs, etc. in diverse cultural contexts.

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9 Information and Libraries in an Historical Perspective: From Library History to Library and Information History

Ilkka Mäkinen
Alistair Black
Miha Kovac
Laura Skouvig
Magnus Torstensson[1]

Abstract

History embraces everything, yet the presence of historical perspectives in library and information science (LIS) curricula throughout Europe has diminished (historical perspectives occur discretely in only 18% of programmes). In particular, the number of courses with the term 'library history' in their title has declined markedly. The reasons – both external and internal – that have led to this decline are identified and discussed. Despite its lower profile in the LIS curriculum, the subject of library history has, paradoxically, undergone a transformation during recent decades. It has consolidated itself as a subject pursued by a resilient body of scholars who continue to disseminate their research in journals and books and at conferences. But more than this, library history has broadened the context in which past library activities is seen to have occurred and has adopted relevant theoretical perspectives from social and cultural theory. Library history has also begun to take account of developments in information services and other 'informational' areas, including the history of the information infrastructure, that do not have libraries as their main frame of reference. A new, more appropriate name for the field, one reflecting a new dynamism, has been suggested: library and information history (LIH). History has always been used as a means of professional legitimation, even if people do not consciously realise they are mobilising history for the purpose. A number of arguments that vindicate the presence of discrete historical perspectives in the LIS curriculum are presented here. Some thoughts about the future of the historical perspective in LIS education are articulated; and the aims, objectives and contents of a model, or sample, LIH syllabus are outlined.

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[1] The group was chaired by Ilkka Mäkinen. Laura Skouvig was not present at the seminar discussions but contributed via E-mail. The text of the chapter was initially outlined by Ilkka Mäkinen. After the discussions in Copenhagen, and in light of additional written contributions received from Miha Kovac and Magnus Torstensson, the text was developed further by Ilkka Mäkinen and Alistair Black, who also finalized the chapter. We thank Barbara Traxler Brown, Lis Byberg, Tiiu Reimo and others for their valuable comments.

Introduction

Across Europe, programmes in library and information science (LIS) educate students for a whole range of positions in the library and information sector, in both private and public institutions. During their careers students will make use of the skills they have assimilated in their studies to undertake practical professional tasks. But they may be called upon – depending on the level of management responsibility they achieve – to undertake fairly high-level tasks in terms of policy making, planning and administration. To be able to fulfill their future tasks, students must therefore be equipped with both pertinent skills and knowledge of the principles of LIS. To what extent, particularly in relation to the second of these requirements, do they need to know about the historical dimension of libraries, information services and information systems, as well as of their own discipline and profession? Why and how should the historical dimension be visible in the curricula of LIS education institutions? Traditionally historical perspectives – taught via discrete courses in subjects like library history, historical bibliography and publishing history – were highly visible in LIS education. Currently only 18% of LIS programmes in Europe contain any kind of discrete historical perspective.[2] Why is this the case? If an historical dimension *is* included in the curriculum, what should be taught to students about their own profession and about the history of library and information services and their relationship with the rest of the society? These are the main questions which this chapter strives to answer.

The original title given to this theme by the organizers of the European LIS Curriculum Project was 'Library and Society in a Historical Perspective'. We felt that this title needed some reformulation. If we were to cover the whole field of higher LIS education, then it was impossible to restrict ourselves to the history and social context of libraries only. Rather, it was our responsibility, we felt, to take account of the entire range of sub-fields that constitute the realm of LIS, including such fields as information management, archival science and publishing studies which do not necessarily have libraries as their main frame of reference.

None of these fields can exist without a history, for: 'Every discipline needs a history' (Black, 2004, p. 33). A new umbrella term to describe the various historical approaches in LIS is needed. The label we suggest is 'library and information history' (LIH) or, more briefly, the history of information. The concept of LIH covers both a broad societal and cultural approach and all relevant forms of information behaviour, infrastructure and institutions. We seek to place LIS in a broader context and identify which historical facts and themes are important for LIS students to assimilate. Many professions, in terms of their education and, indeed, self-identity, posses an inherent historical perspective. Lawyers, physicists, scientists and engineers are proud of their long ancestry. We are convinced that to know the basics of the history of your profession should be a minimum requirement of

[2] See chapter 13.

being a professional, in whatever field. History in this context contributes to professional collegiality.

History embraces everything. It engenders societal and comparative thinking. It is important that we continually make comparisons between different countries, cultures, traditions and technologies. But comparisons can also be made with the past; and we believe this is a crucial component of professionalism.

A lively discussion currently exists concerning the definitions and future of library history and LIH. As a research field, LIH is a vibrant area, unfolding in many directions. New perspectives are opening up not only LIS's past but also the past role of information in society. We need to ensure that these new visions are integrated into the education of professionals in LIS. We should restore the sense of continuity of the profession and stress the fact that we have been here for a long time – even if under different titles and names – and certainly as long as most other professions. Equally, to adapt and survive in the information age market place, our students need to be introduced to wider views that highlight the importance of information throughout history.

But first we should see what has led us to the present ahistorical nature of LIS education and professionalism – something which Buckland (1996, 80) has called 'collective amnesia'. What has happened to the historical dimension in LIS education and is there a possibility of recovery?

The decline of historical perspectives in LIS education

To the reader, this chapter may appear more crusading than others in the volume. The reasons for this go back a long way. Having for a long time been safely embedded in LIS, historical subjects have virtually disappeared from library and information science curricula. In most LIS programmes there are no longer any compulsory courses of a historical nature, and optional courses are few and far between. Davis and Aho (2001, **21**) have written of a 'professional intolerance [of LIH] currently prevailing within the field of LIS'. A certain self-censorship in the choice of themes for theses may result from the negative image of LIH both among the students and professors. Vodosek (2001, p. 120) reports that in Germany '[m]any students are afraid of a negative effect on their job prospects if they are labeled as library historians. This tendency seems peculiar because history is generally a popular topic.' This may be the case especially in institutions that have distinctly vocational goals in their education or departments that have chosen a narrow focus in their education and research. Black and Crawford (2001, p. 130) found similar attitudes in the British Isles. In a survey of LIH teaching they reported how one respondent explained how she approached the task of advising students wishing to embark on a dissertation or thesis in LIH: 'I never accept this choice until I'm sure that the student appreciates that it might be risky in career terms.' Many LIH educators no doubt recognise this approach only too easily. On the other hand, when such warnings are ignored and a history based topic is pursued, the result may well be a constructive one, as is witnessed by the rest of Black and Crawford's (2001, p. 130) respondent's statement: 'I insist that any

historical topic has some general significance. Account of an institution of theme which do not address a broader question are discouraged.' This broader attitude may be part of a solution. In the meantime, there is no doubt that a certain sense of being undervalued is felt by those who teach and research in LIH. They may even find their choice of specialization detrimental for their own academic career expectations.

In Germany the traditionally strong library historical tradition in education seems to have disappeared almost totally, partly as a result of the retirement of strong individual researchers (such as Paul Kaegbein in Cologne, whose chair was discontinued in the 1990s), partly as a result of the organization of LIS education. According to Vodosek (2001, p. 120):

> since the 1970s education for library and information work has been the responsibility of a new type of institution of higher education, the so called Universities of Applied Sciences (Fachhochschulen). The main task of these universities is not research, and particularly not research in the field of history. Most of them have even abandoned the teaching of library history as a special subject. The only University of Applied Sciences which has succeeded in shaping its profile in library history is the School of Library and Information Science in Stuttgart. However, the future for this institution is uncertain.

During recent years the Stuttgart School has been integrated with a school of communication to build a 'Hochschule der Medien', but library and information education was retained as an element. Peter Vodosek, the most prominent library historian in the German speaking area, acted as rector of the new institution. Last year (2004) he retired and it will be interesting to see, what happens to library history in his former institution. There still is a course on library history delivered by him in the curriculum. (http://www.hdm-stuttgart.de/studienangebot/)

A decade ago, as we have noted above, Michael Buckland (1996) was compelled to argue that LIS suffers from a 'collective amnesia'. This amnesia was especially visible in information science, which, according to Buckland, had been until then notoriously ahistorical, at best mythical. This situation had two disadvantages, says Buckland (1996, 80):

> First, as a practical matter, interesting ideas that lack immediate perceived utility are likely to be forgotten. Second, there is a continuing loss of identity. LIS, under variations of the name, has the curious property of perennially being regarded as 'a new and emerging discipline', even a century after the founding of the International Federation of Information and Documentation by Otlet and Lafontaine in 1895.

Buckland was in the first place speaking about the history and the profession of LIS itself , but what he said also applies to the history of the activities of library and information services. In the case of information retrieval and soft information systems, the development of the practical field (even business) is closely intertwined with the development of the discipline.

To be fair, we must balance the rather gloomy picture with some more positive statements. Independent LIS education institutions with strong traditions seem to have managed well in retaining the historical perspective in the curricula, especially in combination with a strong societal element. The historical dimension is strongly represented at the Danish Royal School of Library and Information Science in two compulsory courses in the first year of the bachelors programme. The courses, 'Culture and Media' and 'Libraries and Society' contain a strong institutional element and this means that they combine past and present, because it is not possible to speak about institutions without taking into account their history and societal context. The same kind of approach is applied in the Swedish School of Library and Information Science in Borås, another leading institution, where:

> All students have a course on 'library and society' under their first semester. One important aim of the course is to investigate why libraries have been founded and why they have developed in the way they have. Of course, we analyze the development in question in a very broad historical, economic, cultural, political and social context. Thus it is very important to study the ideas to be found behind various initiatives in library questions throughout history at and what impact these ideas have on current library operation. (Torstensson 2002, pp. 214-215)

Reasons for decline

In his review of the German library history scene Vodosek (2001) laments that 'the Zeitgeist is fostering this regrettable development [i.e. the decline of library history teaching] and the trend seems to be international.' (Vodosek 2001) What more specifically could be the reasons behind the decline of historical perspectives in LIS? We identify four possible reasons.

a) Already ten years ago Black (1995) named an immediate reasons for the decline of library history in the LIS curriculum: according to him the decline was a consequence of a one-sided vocationalism, concentration on teaching transferable, marketable skills. There is certainly much to be said, we feel, for the argument that historical perspectives have been crowded out by the emergence of a virulent vocationalism which prioritises knowledge and skills that can be shown to be directly and immediately pertinent for the workplace, but which pays less attention to the strategic and theoretical knowledge, and the knowledge of principles, to which history contributes.

b) The large variety of subjects now taught in schools of LIS impacts on the time available for niche areas, including LIH. Many areas of library and information science, such as information retrieval, information management and information seeking, have developed rich theoretical knowledge and empirical applications. The hours in the day, week and term are limited and there is so much to teach that is deemed directly and immediately relevant. Even basics of these multiple fields can fill students' calendars, and this leaves less and less time for historical subjects; although this is not to say that many fields in LIS education do not, or should not, address historical perspectives (e.g. the development of various cataloguing and

classification systems since the nineteenth century).

c) One of the weak points in library history has been its lack of connection with the professional historical research community: 'the field of library history has mostly been left to the library world itself. Library history research has mostly been conducted by librarians, students of librarianship and library educators. Inevitably, historians from these groups have less than 'full-time' historians to devote to the study of contextual historical knowledge and to methodological debates in history, with the result that library history is always vulnerable to the criticism that it lacks rigour' (Black 2005). The old library history could at its worst be called antiquarian, self-centered, even myopic, but 'in recent decades library history has moved a long way from its antiquarian origins. Its scholars have begun to appreciate the importance of importing into their research theories drawn from other discipline, thereby endeavouring to match methodological standards existing in 'mainstream' history fields. Much more than in the past, library historians are prepared to explore the contexts in which libraries operated.' (Black 2005) It seems that context is the key word here; without a context library history has little to offer to the rest of history, or LIS for that matter.

d) A final reason is the changing structure of LIS education in general. The disappearance of undergraduate LIS programmes in the USA and United Kingdom may be partly responsible for the decline of library history courses in these countries. Economics has also had an effect. Small, specialised courses can often no longer be afforded. Our fear is that the Bologna process will accelerate this kind of restructuring all over Europe. Consequently, the need to argue for a historical consciousness and component, however small, in *all* LIS courses and fields becomes even more important than before.

The rebirth of Library History as Library and Information History

Historical elements in LIS education have not, of course, disappeared totally. History always finds its way back. There are some elements of LIH, especially the 'information' element, that are more appealing to present educational needs in LIS than the 'library' element. For example, teaching and researching the sociology of the information society (or information society studies), which naturally contains a strong historical dimension, is clearly suited to the new type of courses – such as information and communication management, business information management – that have emerged in recent years.

The transformation of library history into something richer is a product of recent decades. One might describe this transformation as a 'personality change'. The most visible outward sign of the change is the new term used by some to describe the discipline – 'library and information history' (LIH), or more briefly, 'information history' (see the debate on the potential transformation of 'library history' into 'library and information history' engaged in by Black 1998, 2001 and 2005; Davis & Aho 2001; Mäkinen 2004). According to Black and Crawford (2001, p. 128), LIH 'has become more pluralistic and less predictable. It has

moved away from a preoccupation with institutions and heroes towards a concern for context and for analysis of the profession and processes.' It is ironic that Black and Crawford see the seeds of a positive change for LIH in the fact that the subject is nowadays rejected by 'the domain of education for library and information work' which was traditionally its stronghold. LIH feels all the stronger for that very reason, because:

> Freed from the constraints of servicing the world of library and information studies (LIS) and of justifying its existence to practitioners (although the case for its practical relevance can and must be strongly argued), exponents of LIH have found the space to experiment and diversify and thus move closer to the norms on 'mainstream' historical disciplines. LIH has undoubtedly evolved and matured. (Black and Crawford 2001, p. 128)

History as legitimation

History has always been used for legitimation and as a source of identity – by societies, groups and individuals. Even those who say that teaching history is an unnecessary luxury in the LIS programmes almost inevitably at some point of their teaching or research use historical elements as a means of legitimizing and explaining their own views and course contents. There is no escape from history, there are only different ways and degrees of using it.

During its heyday, library history was used in the education of librarianship as a means of legitimation of the library institution, the socialization and identity of future librarians, and as the basis of knowledge of the principles of the professional field. Because historical research until the 1980s so closely focused on the library institution, new and emerging educators and theorists in the information field did not view library history to be of much relevance. When new fields – such as information management – appeared, their protagonists invariably ignored the historical perspective, partly because their fields seemed not to have a place in traditional library history research and literature, partly because their fields were mediated by forward-looking digital technologies: the future appeared more enticing than the past They drew their legitimation from the great onward march and practical importance of their fields. Michael Buckland has argued that 'science information systems have had a privileged status because of industrial and military needs and government policy and also perhaps because the domains of science appear more tractable for information systems than in the social sciences and humanities' (Buckland 1999, 3). Given the emphasis on immediate 'practicalities', it is easy to see why information science has tended to ignore historical perspectives.

To a certain extent the ahistorical attitude in the new LIS education paralleled the fact that modern information services institutions began to see themselves to be bounded less and less by historical traditions, and were relatively untroubled by the fact that they didn't compile great collections but readily discarded all obsolete material, living, some might say, in the perpetual present, seduced by technological innovation. But as the pioneering generation of information scientists began reflecting on their careers, they began to legitimize their activities with a historical dimension. This is totally natural and welcome,

of course; although this observation should be qualified by the plea that such histories are written according to the accepted rules and methods of the history discipline.

The new line of historical research in information science and systems (Bowden, Hahn and Williams, 1999; Bowden and Rayward, 2004) seems to have received its impetus from three sources: information scientists, science historians and veterans in the field of information science and systems. The science and systems in question are now old enough that the historical aspect of their development has become apparent. They have made a decisive contribution to technical, economic and social development. It is only natural that people who have spent their working life developing these systems and are now nearing or at retirement age turn their eyes towards their career. Those who undertake research, and in doing so recover a heritage for information science, clearly do not find themselves at home in traditional library history. Only time will tell if they come to adopt the idea of an information history comprising the history of information science and information systems allied to the history of libraries and print culture, and comprising also the history of the information infrastructure generally (Mäkinen 2004). It is revealing that the proceedings of the pioneering conferences on the History and Heritage of Science and Information Systems (Bowden, Hahn and Williams, 1999; Bowden and Rayward, 2004) do not contain references to the library history tradition. For the moment, the paradigms seem to belong to totally different universes even though there are individuals whose careers have straddled both.

Because of the original ahistorical nature of the information science and systems field, extensive 'indigenous' history concerning its development was not possible until the discipline had more fully developed. Boyd Rayward, one the first to engage in the historical study of the new information field, asked in 1999 (Rayward 1999, 19) why:

> over the last few years a strong interest has emerged in the history of information science. [...] Is it because the field has attained that state of maturity in which a desire to understand the processes and stages of the field organically develops? Is it merely the result of a number of hitherto isolated and fragmentary historical studies at last having achieved a critical mass that commands attention? Is it simply the achievement of a limited number of individuals believing passionately that, in this as in any other field, effective knowledge of the present requires a critical element of historical understanding? Could it be that their energy and commitment have helped create an agenda that cannot be ignored?

The prospect that ignorance of historical dimensions will soon disappear is encouraged by what some see as a coming together of library science and information science. Here and there we can hear the sound, not always overtly voiced, of suspicions and disagreements that are present in LIS literature stemming from a rivalry between existing paradigms of research in the historical aspects of library and information field. They are a result of an incomplete integration of the elements of library and information science. To speed up and reflect the integration of the two professional areas, departments of LIS have often been renamed as departments of information studies, but even this has not always relieved the tension between the two elements (Mäkinen 2004). Nevertheless, Bowles (1999) believes that 'an 'information détente' is emerging between the 'two cultures' of information scientists and librarians' (see also Buckland 1996; concerning the confrontation of

librarians and computer scientists and engineers, see Rayward 2005). It is possible that the tension will eventually be relieved, as the generational rivalries are left behind us. This will assist the development of the new LIH, or information history, paradigm. The new conception of LIH does not, in principle, contain any internal division of domains.

Why are historical perspectives in LIS education important?

The eclipse of historical perspectives in LIS education may simply be a passing phase at a time of rapid change. It is possible that the decline of historical content in LIS curricula will be corrected by a growing body of new research in those historical phenomena that have been neglected by previous research traditions. Research and education go hand in hand. From an epistemological point of view, it is scientific research that constructs the knowledge to be transmitted in higher education. This applies even to historical knowledge. In many disciplines one finds that the historical dimension is represented in the curriculum quite naturally; in the form of the unavoidable imparting of historical background to subjects, problems, theories, paradigms, discourses and so forth.

We can easily make a long list of the positive effects of the education or integration of historical perspectives in LIS. Black (2004, p. 33) claims that:

> any body of knowledge wishing to be called a discipline needs to have a history. The word 'history' is used here quite deliberately, to distinguish it from the notion of the 'past'. Any discipline, or expert practice, clearly has a past [...]. In the context of an expert practice's past, origins and development are there to be traced and, hopefully, the documents that form an historical record are there to be uncovered. It is the acts of tracing origins and development, and uncovering evidence, that turns a past into a history.

This is obvious in the case of disciplines that are essentially 'academic', where the history of their evolution is central to their identity: for example, in respect of the history of sociology, or the history of philosophy/ideas, or, indeed, the history of history itself. And it should be obvious for LIS and its subfields as well.

But why specifically are historical perspectives in LIS valuable? A number of benefits can be identified; although it has to be emphasized that these are not exclusive to LIH and may also be relevant, naturally, to other areas of LIS:

1. *Discipline and professional maturity and identity* - Historical awareness not only contributes to the capacity for self-criticism, but also helps to build an authentic identity based on a consciousness of not only a librarianship but also an information management heritage.

2. *Education in principles* - True professionalism is based on theoretical knowledge, and history helps identify fundamental, guiding theories and principles.

3. *Critical thinking* - Historical study helps foster the critical faculties. Information history can generate an incisive questioning of established, accepted, dominant beliefs about the role of information in society, past and present. This questioning is ultimately conducive to a training of the mind from which professionals can draw confidence and flexibility.

4. *Interdisciplinarity* - The pursuit of information history an interdisciplinary approach. Interdisciplinary study and perspectives encourage adaptability. It is misleading, however, to equate 'adaptability' with 'flexibility'. An effective and flexible combination and use of skills can only be made if professionals exhibit adaptability in addressing the unpredictable problems with which professionals are inevitably presented. Adaptability in this respect is like a language acquisition facility, or program of grammar, which serves to handle a vocabulary that is made up of a multifarious array of flexible skills; and it is discursive, interdisciplinary fields such as information history which can help write such a program for adaptability.

5. *Social awareness* - Although drawing a good deal of their prestige and methods from the world of science, the information professions are essentially people orientated. Their remit is to develop systems and services that serve a social demand or purpose. History engenders awareness, understanding, and tolerance of 'other' cultures and patterns of behavior, including information-seeking behaviour. History challenges 'othering'. Thus, absorbing a sense of history can help the information professions to develop further people-centered approaches to service design and delivery; and to create information services which are rooted in community needs and which challenge social exclusion. History, and a broad social perspective in general, helps information professional to place things in their proper context. It also helps to corrode prejudices, as well as to avoid blind belief in technological determinism. Historical perspectives help maintain an ethically strong attitude towards one's own and other cultures. They also generate a stronger awareness in the importance of democracy and human rights, including the right of access to information.

6. *Traditional skills* - Studying information history can serve to restore an appreciation of traditional modes of learning (the reading and comprehension of textured discourse) and of presentation (good writing skills, inclusive of the ability to organize material and construct a fluent argument—argumentative skills link back, of course, to earlier comments on critical thinking).

Similar goals and gains are to be found in a number of LIS course descriptions. For example, a course offered in the Danish Library School, 'Libraries and the Society', has among its goals the aim to develop 'an understanding among librarians and information professionals of their identity, self understanding and professionalism'.[3]

[3] Reported by Laura Skouvig.

An important occasional factor emphasizing the importance of historical awareness is the process of digitization, during which old materials become 'actual', thereby requiring librarians and information professionals to know more about them, including their origins and the historical contexts in which they were created and later used. If we really are going to step into a new age characterized by vast stores of digitalized cultural heritage, one way or another we have to take with us a sense of history and transfer it into the new media; and we have to be able to understand historical and culturally foreign materials in order not to destroy them.

The information professions are expanding, not only in scale but also in scope. Besides librarians, more and more professionals of other 'memory organizations' - in museums and archives for example - are being integrated into LIS education, or at least sharing much more common ground – and courses indeed – than in the past. This inevitably imbues LIS with a stronger historical element dimension.

The European context brings forth some additional arguments that support the presence of historical perspectives in LIS education. It is probable that the historical-social aspect in LIS education presents better than many other aspects a common European dimension. At the same time, information history, though common past European information trends and movements can be identified, inevitably emphasises European diversity. After all, any LIS education programme with a historical dimension will pay most attention to the library and information past of the country in which it is delivered.

The diversity in European library systems is rather wide and even the concept of the public library is understood differently in different parts of Europe. It is evident that knowledge of the common European heritage in libraries and information services, together with basic understanding of the different historical and social conditions in which the national library and information systems have developed, can help students and teachers to take up opportunities to work and study in other parts of Europe. Enhancing the mobility of the profession will also enhance its efficiency and flexibility.

Europe is a multicultural region. Public libraries in particular, which are owned and governed by local administrative bodies and financed by local funds, honour and protect national languages and cultures, as well as, increasingly, the languages and cultures of immigrant populations. Students in LIS should be able to recognise the multicultural nature of Europe and in this respect socio-historical perspectives have an important role to play.

The future

An important point to remember when discussing the future of the historical perspective in LIS, is the new unity of all memory institutions. It has become commonplace to view memory institutions – libraries, archives and museums – as a whole. Education of specialists in these fields has become increasingly integrated in many countries, especially in relation to the link between LIS and archival education. Traditionally, the development

of libraries, archives and museums, as well as the professional preparation for them, has largely ocurred in isolation, but recent technological and conceptual convergence has created possibilities to place the historical dimension of all these professional practices under a common 'information history' banner. This tendency is a positive challenge for the historians and historical education in LIS.

A possible danger is that at present both research and education in historical perspectives are too dependent on the efforts of isolated, though dedicated, individuals. There are few permanent positions dedicated to historical subjects in LIS educational institutions. When an individual steps aside, there is no certainty of continuation. The continuation and preservation of historical awareness in European LIS education could be greatly enhanced by the publication of a European textbook on the historical aspects of the field of LIS. This could be supported by additional web material, including links to national 'presentations' of library and information history.

In their audit of the library and information history element in LIS education in the British Isles, Black and Crawford (2001, p. 127) found that 'LIH remains a relatively isolated component of the LIS curriculum and research environment, although some impressive activity and a small number or centres of excellence are identifiable'. Nonetheless, the foundations are there and the future security of historical awareness in LIS will be found in building on the small, existing historical enclaves that nestle within the territories of information professions. However, a renaissance in LIH education will only happen if a case can be made for the value of historicism to professional practice; and certainly, in the information age, the strengthening of the information component (as opposed to the library component) of the subject appears not only natural but something which promises wider appeal.

We may allow ourselves to be fairly optimistic about the future of historical perspectives in LIS education. The current excellent activity in LIH research is a sound investment, providing a springboard for the future. If research is of good quality, if the themes are relevant, if it is published in scholarly, esteemed journals and in well-written monographs produced by reputable publishing houses, it will be appreciated in the wider LIS community. If the outputs remains high in quality, and if themes are insightful and relevant topics, then LIH research will be difficult to resist and will have a good chance of finding its way back, as a natural and desirable component, into both LIS education and continuing professional development.

Historical perspectives in LIS: the main components

What should historical perspective in LIS education consist of? There are two ways of integrating historical perspectives into LIS education. Firstly, an historical perspective, can (and should be) present in all courses in the curriculum. Secondly, we believe that there is a need for special, history-rich courses, of varying lengths and complexion depending on the curriculum and the institution in which they are to be delivered. These two possibilities are not, of course, mutually exclusive. Most educators in LIS are prompted to say 'something',

however fleeting, about the historical dimension of their particular field; this is only natural. But in addition there should be a certain amount of specialisation in information history. History is a discipline (as opposed to a mere field) with particular methodologies and theories and it is not possible or desirable to expect all LIS researchers and educators to master them.

In the tentative model, or sample, syllabus we have designed, and which we present at the end of this chapter (see Appendix), we have endeavoured to outline the main elements of a common European historical-societal perspective; one that students in LIS education can acquire, in whole or in part, during their education.

The variety of themes that we have suggested should be seen as a reservoir from which different educators, programmes and schools may draw the appropriate choices suited to their particular needs at different levels. At the one extreme our syllabus can form a whole degree, at the other it can form the basis simply of an induction lecture, to give incoming students at least a taste, or sense, of the long history of the profession they are entering.

Our syllabus offers an opportunity to teach a common, basic understanding of the European heritage in the field of libraries, and perhaps information services and infrastructure in general. Much of Western and global culture has been shaped in Europe and in regions culturally attached to Europe. Many of the elements of the modern world were first designed in Europe; and many of these were informational in nature, from book printing to the evolution of information science. However, we should not, of course, concentrate solely on Europe, because Europe is not, and never has been, the centre of the world. Consequently, we are keen that our syllabus contains references to developments and historic practices globally, outside the European context.

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Appendix. Information and libraries in a historical perspective: a sample syllabus

This syllabus can be drawn upon to formulate a single module or course, or a set of modules or courses, within an LIS qualification. Theoretically, its contents can also form the basis of a single induction lecture or, at the other extreme, although unlikely, an entire degree in LIH. Aims and objectives are outlined below, followed by a sample, indicative, reading list.

Aims: To encourage, in the context of LIS, the idea that historical perspectives are necessary in order to understand the present and prepare for the future, and to emphasize that this concept should be applied to all areas of the curriculum.

Objectives:
To study and understand:
1. The main phases in the development of information societies through history;
2. The global, inter-cultural origins and growth of information and library activity;
3. The international, European and national library and information heritage;
4. The past development of the library and information disciplines and professions;
5. Information and library activity as a reflection of political, economic and ideological systems, of individual and social identity and of social variables of age, gender, race, class, culture etc;
6. Current issues in LIS in the light of of past perspectives.

These objectives give rise to the following content:

Objective 1
The main phases in the development of information societies through history
- phases in the evolution of human communication: oral, manuscript, print and digital culture;
- writing systems;

- formats: scrolls, codex, electronic document;
- materials: clay - papyrus - parchment – paper - electronic screen, electronic paper; recording equipment: stylus, pen, ink, keyboard, audio-visual;
- history of reading: loud to silent reading, decline of communal reading, intensive-repetitive, extensive reading; associated social and power relationships;
- social, economic and ideological factors: Enlightenment, industrial revolution, modernity, post-modernity, globalization;
- technological development, manual and electronic information technology, theory of social/technological determinism;
- the history of the digital information society and the notion of historic information societies.

Objective 2

The global, inter-cultural origins and growth of information and library activity

- the development of information and library activities in different parts of the world through the time: European developments, Near East (writing systems), East Asia (China, Korea), Muslim world, Americas (Mayas, Incas);
- information related activities: emergence of accounting, statistics, biblical reference systems;
- the role of printing in the evolution of nations;
- the Enlightenment and the growth of libraries and information culture (including publishing, copyright, birth of mass education and general literacy);
- industrialization: mechanization of printing, emergence of information management in the late nineteenth-century corporation;
- development of communications technology (telegraph, telephone, postal services);
- popularization of newspapers;
- explosion of public sphere libraries, such as community libraries, subscription/circulating libraries, modern public library movement etc.;
- evolution of book markets, paperback revolution, personal libraries;
- emergence of mass media and visual culture (including radio, TV, film, video, CD, DVD);
- the development of digital culture, the Internet and other networks.

Objective 3

The international, European and national library and information heritage

- initial focus on one's own national library and information systems in comparison with other national systems: why do national systems differ?
- documentation movement, Otlet and Lafontaine;
- interlibrary lending and cooperation;
- bibliographic control;
- databases;
- international cooperation: IFLA, FID, ICA;
- flow of information over the borders;
- freedom of information;
- standardization.

Objective 4
The past development of the library and information disciplines and professions

- librarianship, library science, information science, LIS;
- library and information theorists and visionaries (Naudé, Schrettinger, Otlet, H. G. Wells, Dewey, Vannevar Bush, Mooers etc.);
- education and training of professionals, professionalization of librarianship;
- national associations and bodies;
- international organizations;
- biographies, lives of leading and pioneering LIS practitioners.

Objective 5
Information and library activity as a reflection of political, economic and ideological systems, of individual and social identity and of social variables of age, gender, race, class, culture etc.

- empirical evidence and theoretical reflection on these relevant issues.

Objective 6
Current issues in LIS with the help of past perspectives

- 'case study' examples studies and discussed, e.g.: conceptual and technological similarities of the manuscript culture and the digital culture; role of libraries in the evolution of literacy in the past and now; conscious destruction of libraries & publications (wars, catastrophes, reckless microfilming & digitization); dichotomy between non-profit and profit cultures (e.g. libraries and publishing); role of libraries and information in the democratic processes; comparison between social inclusion initiatives, past and present; censorship and political control, past and present.

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10 Mediation of Culture in a European Context

Anders Frenander
Audrone Glosiene
Henrik Jochumsen
Jofrid Karner Smidt

Introduction

In order to define the place of an academic subject area such as Mediation of Culture in a European LIS curricular context, an obvious first step would be to discuss the possible content of the field. All three elements included in the above title are of interest here.

The concept of mediation

As a start, we will look at the first of the three concepts: *Mediation*. Here we might encounter a sort of semantic ambiguity across languages. It appears that Scandinavian-speaking individuals (as the majority of members of the working group preparing this chapter) experience rather little difficulty in understanding the meaning of the word. In their vernacular, the equivalent terms are "formidling" (Danish and Norwegian) or "förmedling" (Swedish) and they denote an act performed by a third party or player aiming at bringing into contact two other parties (either people or people and things). This act is more or less equivalent to that of a clearing-house and does not necessarily involve any hierarchical relations between the one doing the mediation and the two other parts.

Obviously, this does not seem to be the case for individuals whose mother tongue is English and to whom "mediation" in this context appears to be more puzzling than informative. The term also denotes an act, which involves – in one way or another – a non-equality relation between the person mediating and the other parts.

But what we in this chapter mean by "mediation" is to a great extent construed around that kind of activities, which the library performs as an institution in addition to the task of keeping a media collection and making it available to its users. These activities include the presentation of cultural events to new audiences, facilitating library visitors' encounter with different kinds of cultural activities and artefacts, reader development and so on. Expressed in a more general manner, one can say that it is about serving as a meeting place in local social, cultural and political life. When offering an arena where authors can meet their readers, where artists may exhibit their art and where public

debates and discussions about, for instance, important local issues can be held, the library service can be defined as "mediation of culture". There are, of course, many other examples of relevant activities, but we think that the examples given here provide a hint of what is meant by "mediation" in this context.

Cultural mediation and democracy

A very important aspect to note is the essential part mediation of culture in libraries can play in strengthening and widening the popular participation in democratic processes in the late modern society. The present-day library is actually one of the most important arenas or institutions in maintaining a vital public sphere, locally as well as nationally.

The concept of culture

Another difficult or tricky term in the chapter title is, of course, *culture*. We shall not dwell too long on that concept, about which the famous British cultural theorist Raymond Williams once said that it is "one of the two or three most complicated words in the English language" (Williams, 1988:87).

Anyhow, it is always useful to spell out the main denotations that the concept has nowadays. We may talk about a universe of meanings, where the most common way of speaking about "culture" is to distinguish between an anthropological meaning and an aesthetic meaning. These notions share a common root in the Latin verb *colere*, which means, as Williams writes, "inhabit, cultivate, protect, honour with worship" (ibid.). During the 17th and 18th centuries, a differentiation started appearing between two concepts. On the one hand, a concept covering the arts and also implying a certain personal betterment and refinement emerged. On the other hand, a broader, more collective and inclusive concept was also developed. This latter form was clearly stated in the 1780s by German philosopher Johann Gottfried Herder (1744-1803), who used the term in a way that opened for an anthropological and relativistic understanding of culture as the habits, thoughts and way of life of a whole people, or a group. To be sure, the full potential of this approach was not to be realised until the second half of the 20th century.

Betweeen aesthetic and anthropological interpretation

The aesthetic interpretation of the concept also has, as was hinted at above, an old history. In the era of, especially, the German Romanticism, this use of the word came to the fore. But it was an English writer and critic, Matthew Arnold (1822-1888), who in the 1860s formulated a sort of paradigmatic content of the aesthetic meaning of "culture" as being "a pursuit of our total perfection by means of getting to know […] the best which have been thought and said in the world" (Arnold 1869/1965:234). In his view, it was, undoubtedly, possible to rank the achievements of different authors, artists etc. In this way the understanding of culture as something elitist and highbrow, belonging to just a small educated upper-class in society, grew.

This conception of culture has been seriously challenged in the second half of the 20th century. Cultural activities are no longer viewed as something that is reserved for only a

highbrow, educated elitist segment. Many kinds of activities represented by what earlier was called “lowbrow”, “popular” or “mass culture”, and consequently not considered to be “real culture”, are now included in a broad concept, although still mainly “aesthetic”.

In this way, you can, theoretically at least, line up an area covering three different concepts of culture: The old and narrow, high-brow aesthetic notion; the new, broad and “no-brow” aesthetic notion, and, finally, the very broad, anthropological notion of culture as “a way of life”. Within this area, we can identify the concept of culture referred to in this chapter as being located somewhere at the axis between the broad aesthetic notion and the anthropological one.

The European context

The third element in the chapter title is *a European context*. There are, of course, several contexts to be considered here. For one thing, there is the process of making higher education in Europe more comparable – the aspirations and mechanics of the Bologna process. In this sense, we are witnessing a political process led by the ministers of education of more than forty involved European nations. In order to make it easier for students from all these countries to spend some part of their education abroad, the content of different programs, courses and so on must be possible to “translate” from one country’s educational system to another’s.

The European project on curriculum development dealt with in the present publication obviously forms part of that process, and from that viewpoint the meaning of the “European context” is more or less given. A more or less common, trans-European structure for higher education programmes in the European countries is slowly coming into place and in that context LIS education is no exception. We are speaking of an undergraduate level covering of three years of study and leading up to a bachelor’s degree. After that sequence of studies, the student can continue to an advanced level involving two years of study. When the total of five years is completed, the student will obtain a Master’s degree. On top of that, there is the option moving on to doctoral studies encompassing three years of study including the writing of a dissertation, ending up with a PhD degree.

Underlying these ambitions, and behind the whole European project, may lie – for instance among the leading politicians – a vision of shared values and goals. If this is the case, the whole issue becomes much more problematic and difficult, because the discussion on the values and goals on which the joint European project should be based still appears very rudimentary. The profession of library and information specialists does of course have its own values, which should be conveyed to LIS students everywhere. These include the freedom of expression, intellectual freedom, equality in access and others, but they are obviously not limited to a European context.

Common European culture in question

The concept of a common European culture is rather vague and much disputed. It is hard to imagine cultural values common to all citizens in Europe. But perhaps one can talk about a common European cultural heritage? In considering the European context in terms of LIS education, one has to acknowledge that various LIS schools throughout Europe, cooperating and interacting intensively on many levels, remain affected and in some degree bound by local and national traditions and values. As indicated by findings of the small-scale survey we conducted in order to gather material for preparing this chapter (see below), LIS schools differ a lot, also in respect to mediation of culture as a teaching subject. In other words, it is obvious that a thorough pan-European discussion will be needed if we are to perceive "a European context" as equivalent to shared values or "European culture". And, who says that such a discussion would lead to consensus about these issues?

The European context as a diverse European palette

The "European context", then, can perhaps best be understood as the different structures, conditions and cultures that make up the diverse European palette. If so, and this interpretation seems to be the most "practical" and helpful one in this context, the LIS curriculum must include coverage of different countries' different cultural traditions, intercultural communication, different cultural policies and different structures of cultural life.

In this chapter, we advocate this last interpretation. The LIS syllabus should be so broad and open that the kind of information and knowledge hinted at can be easily included at the undergraduate level as well.

It is of utmost importance that LIS students are provided with the theoretical and conceptual tools so as to be enabled to perform not only a superficial exchange of views and opinion about these issues but also to understand, reflect, critically evaluate, and articulate the complex issues of cultural policies, cultural theories and cultural history.

Cultural mediation – a general European curriculum task?

Summarising this meta-level discussion on our topic, we conclude that mediation of culture is a very vital part of the libraries' tasks, especially those of the public libraries, and we suggest the following definition of the term: Mediation of culture might be understood as the main task of the library as a cultural centre in the local community as well as an activity pertaining to specific types of material in the library. It relates to different rationales of cultural policy, cultural theory, considerations on cultural and artistic quality, but also to technical measures and pedagogical instruments. The contextualisation relating to the needs and conditions of different groups of users is a main aspect of this work. This is valid both in relation to the library as a physical room and as a virtual room.

This means, of course, that knowledge on why and how mediation of culture is undertaken must be part of the LIS curriculum. The culture to be mediated is based on a rather broad view of the concept; it is definitely not about some kind of "high-brow culture". And clearly, the diversity reflected by the many European countries must be taken into account. Therefore, as an academic subject area, mediation of culture must be taught as an integrated part of the curriculum thus covering aspects and elements of the overall cultural system, which, in turn, represents the sociological, historical, institutional and legal conditions for the production, consumption and reception of culture. These conditions should primarily be related to the LIS sector, but they should also to be put in the context of the general social development and the local, national and global cultural policy and cultural planning.

From the findings from the European LIS School Survey we gather that, for the time being, courses covering this kind of topics are not too well represented at the various LIS schools in the different parts of Europe. About one fourth of the schools that answered the survey questions stated that they do run courses of that nature. Our own, very simple and ad hoc-like, survey informally undertaken among the LIS school colleagues represented at the Copenhagen seminar in August 2005 seems to indicate that there might be a difference in this respect between the continental LIS schools and those schools that are located in the United Kingdom. In total, we received 18 answers, of which three stated that they do not at all cover the topic of cultural mediation. Two of them are British, the third Italian. The other 15 schools do include course topics related to mediation of culture in one way or another in their syllabi, and 11 of these academic institutions offer special courses devoted to this theme under different headings such as "Culture and Society", "Cultural Policy" or "Culturology".

Therefore, the academic subject covered in this chapter may be considered a theme that to a limited extent is catered for in some of the European LIS schools, although far from all of them. The scope and depth of treatment of the range of courses offered obviously vary quite a lot among the different countries. In all countries, there are different historical traditions for and approaches to how libraries are organised and managed as well as with regard to how librarians have been educated. If there is a trend towards a more common, pan-European pattern of how the educational schemes are designed is very difficult to identify. The data collected in the European LIS School Survey or, more modestly, in our own little survey, do not disclose any change. For our part, as authors of this chapter, we would very much like to see a general movement towards the recognition of the importance of this chapter's academic theme, and, of course, also the development of courses on all levels that are explicitly devoted to matters of mediation of culture, cultural theory, and cultural policy and so on. We think that an educational programme merely concentrating on the techniques of document retrieval, classification and knowledge organisation, subjects, which are often named the core or kernel fields of library and information science, cannot adequately prepare the students for the challenges of their future profession. It is our belief that literary, medial and cultural studies, i.e. subjects that all provide important inputs to the libraries' capacity and capability in the mediation of culture would help to open up the channels between libraries and their users. Knowledge of the social world structuring the life of the library users and forming the institutions that

influence library policies is indispensable for the future librarian. Librarians are agents in the field of cultural production, especially as intermediaries between the producers and consumers in this sphere of activity. Cultural consciousness, communicative ability and literary competence, those characteristics and assets may be seen as the three main building stones of the cultural dimension in library education.

The contents of courses covering this theme must, by necessity, be decided by the different schools so that they can be smoothly adapted to the specific historic, national and political contexts of each school. But perhaps we should be allowed to set up a list containing a number of key words that can serve as a guide for the development of courses. Such a list would include cultural theory, cultural politics, cultural studies, cultural history, cultural production, cultural consumption, concept of culture, globalisation, information policy, concept of quality and many others.

Cultural Mediation - core curriculum

Is the above theme to be considered part of the "core curriculum" of LIS? We feel a bit reluctant to use the word "core" in this connection. Drawing on experience from other academic subjects we fear that the use of such a word can easily produce a rigid definition of the contents of a subject, in this case Library and Information Science. If we define the "core" of our subject area, we will have to define a set of boundaries within which this core exists. Consequently, there will be aspects, topics and theoretical and/or methodological perspectives, which fall outside of these boundaries and there is a risk that they will be put in a marginal position or even totally excluded from the subject field defined. In our view, this may prove very negative for the dynamics and vitality of our subject area. This kind of division between a "core" and a "periphery" – and this is at least our experience – very often threatens to make a subject field petrify.

In order to avoid this kind of development, we suggest a shift in focus so that consideration is given to "basic requirements" or "basic capabilities". By talking about "basic", you are only stating that these thematic elements, issues and perspectives are those to start with. They are not singled out as those defining the subject as a whole. The number and nature of topics or course elements to be included in the curriculum for any LIS education programme are of course nothing that can be decided outside the specific educational context within which each LIS school is operating. But at the same time, the definition of what is to be considered as basic does not exclude the option of offering supplementary course units covering other topics. By analogy, this reasoning is also applicable to the competences and "abilities" the librarian or information specialist needs to develop.

Conclusion

All this said, we do, however, think that it is of utmost importance that the theme we are discussing in this chapter is included in the basic competencies of the future librarians

and information specialists. Consequently, the theme, in one disguise or another must be part of the basic core of any comprehensive LIS curriculum. But, as we tried to indicate above, this theme is a broad one and it is necessary to adopt an equally broad approach when it comes to teaching and researching. The multiplicity and diversity in theoretical and methodological views and apparatuses must be safeguarded. In the fields of cultural sociology and cultural theory and related areas, we meet an abundance of theories, concepts and research methods that all of them have their own raison d'être. Likewise, all of them may be taught to the students. But as library and information science is concerned not only with cultural sociology and since room must be reserved for many other topics, the decision on what aspects of cultural sociology to be included and what to be excluded must rest with each individual school or department.

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11 Practice and Theory: Placement as part of the Curriculum

Constança Espelt
Primož Južnič
Gerda van der Molen

> *The ultimate goal of the education system is to shift to the individual the burden of pursuing his or her own education. .... The world is an incomparable classroom, and life is a memorable teacher for those who aren't afraid of her (J.W. Gardner 1964, p.12).*

Abstract

Work placements are about preparing students to enter a profession. Within LIS education practical training and placements have had, and still have enjoyed varieng levels of interest within the LIS community. It is also characterised by a wide variety of forms and objectives. Remarkely little has been written about it in the recent professional literature, while the need for structured research is obvious. Discussing placements should also be done in accordance with the fundamental problems facing LIS programmes today. Graduates are today encountering a great variety of organisations to work in and therefore a professional has to be very flexible. Clearly, placement should support this flexibility as well as other competences described in the Dublin descriptors. In the triangle of stakeholders thought is given to the added value of placement for students, host institutions and educational institutions.
To enhance the quality of placement a number of reflective considerations and practical suggestions for different aspects of organising placements are given.
Special attention has been paid to international work placements. To meet the growing need for international placements cooperation between LIS schools could help to overcome some of the barriers.

Introduction

LIS education and training can take the form of course work, reading seminars, projects, theses, and practical work. While the first four options have been applied fairly consistently, practical training or placement, has had and still has its ups and downs and taken different forms and objectives. For the purposes of this text, the terms internship, work placement and practical training will all refer to a out-of-the-classroom experience. These can take place in libraries or other information agencies prior to the awarding of the degree. Today the value of practical work and placement has been established and

possibilities in this area are offered and required in a vast majority of LIS educational institutions in Europe. LIS programmes, without some sort of practical training, are very rare. It is certainly not an exception in higher education. As in LIS programmes, the practical component remains strong as in medicine, pedagogical professions and communication programmes.

Ultimately placement and practical training are about preparing students to enter a profession. It has the potential to impart those, often hard to define but necessary, career skills in addition to the practical requirements of the work itself. LIS programmes are among the higher education programmes, in which work placement and practical training have always been an important part of the educational programme.

The reasons for this are two-fold. One of the reasons is that prior to the development of formal graduate education, a person learned to be an LIS professional through on-the-job training. Sometimes known as 'Sitting-next-to-Nelly'. The other reason is, that educators in LIS programmes were themselves usually practitioners before starting their teaching positions. They learned to value practical experience and were promoting it in LIS programmes. For successfully educated professionals in the core business of connecting knowledge organization/information retrieval and information seeking behaviour and user oriented approach, real life experience is required. The level of abstract in this field is high and teaching principles/abstract thinking must be the basis of LIS programmes. Many concepts are not truly understood until students can translate them into practice.

That is why placement should be structured and supervised by a member of the teaching staff and a practitioner, should take place in approved institutions, should involve clearly defined tasks and goals, and also should include feedback and evaluation.

A search in literature

So placement and practical training in libraries and other information agencies have an important, although often forgotten meaning in LIS education. May be, forgotten is not the best phrase to outline this phenomena. In spite of the widespread acknowledgement of practical experience as a vital component of LIS programmes, remarkably little has been written about it in the recent LIS professional literature. Usually case studies are presented, but the lack of more structured research is obvious. There is a need for a model of the integration of assessment of student learning outcomes and placement and practical training effectiveness. Ten years ago Beard (1995) argued, when discussing the problems of practical placement, the hypothesis that practical placement for students of librarianship are especially problematic as the student, often straight from school, needs experience of the "working world " and its expectations as well as specifically library and information work. These two needs may conflict, resulting in demodulation for students and frustration of the host institution. He describes the placement pattern at the University of North London School of Information and Communications Studies and discusses how it addresses these problems. A short first placement in the second year helps to acclimatize the student to the expectations of the workplace, while the second,

longer placement in the third year, and linked closely to a management module, focuses the student's attention to the specifics of work in a library or information unit.

A recent paper presenting LIS educational institution practical training experience paradigm, that the authors developed after their successful participation as a supervisor and student, is a rather rare example of such thinking (Kelsey, P., Ramaswamy, M. 2005). This experience paradigms and perspectives pertaining to the supervisor and the student (based on training and preparation of the student for agricultural librarianship in an academic library) is explained and suggested as a model. The model for the supervisors elucidates the stages – planning, training, mentoring and evaluation and for students explains the phases – awareness, interests, planning and participation. It is a pity that views of the practitioner and host institution were somewhat left out, probably due to the specific settings of the placement (academic library).

Students themselves present, after successful placement experience, case studies as a sort of evaluation project which also can result in different models. Two graduates from the University of Hawai's LIS Program analysed the effect of their experiences in a semester-long teaching practicum and a formal graduate level course in instructional methodology and propose a model of instruction librarian education. A clear advantage for Library and Information Science students on their way to professional careers as academic librarians, is the chance to teach at the college level. Their experience is that adding an instruction practicum into the LIS curriculum, while learning how to teach, may significantly and positively contribute to better prepared and more knowledgeable library science graduates. (Meulemans, Y.N., Brown, J. 2001). Another interesting view from United States LIS education experience is that the practicum period in LIS may be the most critical period for students to learn about information needs of different users and their communities and to learn to work with multicultural groups (Cuban, S., Hayes, E. 2001).

Practitioners rarely present their position and experience with placement and practical training, at least in professional publications, in a paper form. It is more common to hear about this in the form of anecdotic evidence. A LIS graduate, who moved after many years in library acquisition work, to publishing has presented her experience (Moynahan, S.A. 1997). Today the author is convinced that library school students would benefit from a practicum in the publishing business. In such a setting, they would be exposed not only to business practices and decisions, but also to many libraries' acquisitions departments practices. Such training is not specific to any institution, and a student would see the full range of acquisitions activities from a non-traditional perspective. An interesting point of view and well known fact is, that practical experience, as well as thorough grounding in theory, are essential for efficient work as a professional. The placement should be done in different information agencies and not only in traditional ones, such as libraries. These benefit also the graduates that will work in libraries and other information agencies.

Practitioners, recent graduates can be the best source of information and connecting force between educators and practitioners. As a new librarian or any other information professional, starting a job can be stressful and overwhelming. The transition from

graduate school to a professional position is a challenging one. The paper reviews the literature related to graduate school preparation for collection development and presents relevant experiences of recent graduates (Tucker, J.C., Torrence, M. 2004). The authors state that many librarians experience the stress of this move, because in most instances recent graduates do not have the necessary skills, simply due to lack of applied experience and education. Authors further state that their studies show that practicum should focus on areas in which student contributions can be made within the time frame available and should exclude those areas in which it is not possible to provide a meaningful experience in the context of a LIS programme.

Discussing placement and practical training in LIS programmes should also be done in accordance with the fundamental problems facing LIS programmes today. There is an ongoing discussion among LIS educators about the future orientation of these programmes. One of the proposed strategies is to expand and diversify the programme into broader information management and technology areas. It is called "survival" strategy. It is a shift from a traditional institutional focus to an information centred focus. Traditional LIS education is compared with pandas, lovable and cuddly, but doomed to extinction. (Van House N.A., Sutton, S.A. 1996). This position has many supporters, but also critics that claims that turning our backs on our library practitioners and their educational needs, would be hard to justify, on either philosophical or economic grounds (Hildreth, C.H., Koening, M. 2002). One of the "Panda syndrome" authors has expanded his approach toward practice training as a shift from the apprenticeship as the mechanism for combining theory/education and practice are combined, for clinical experience (Sutton, S.A. 2001). Clinic represents a student experience through which new knowledge, rooted in the research experience, is applied to solving an intractable professional problem. So by definition the clinical experience is not based in the profession's legacy knowledge and experience, but seeks solution through substantial innovations. Graduates are today facing a great variety of contexts/organizations to work in and therefore a professional has to be very flexible (Lørring, L. 2004). Practical training and placement should support this flexibility as weel as other competences mentioned in the Dublin descriptors.

Even if practical training can be considered popular and widely accepted by those responsible for designing and offering LIS educational programmes and by the community of practitioners, several issues have been raised about the nature of placements and their objectives and organisation. The advantages of practical work include the opportunity to use theoretical course work in real life. Ideally, the internship, well and skilfully supervised by teaching staff, would give the student a chance to integrate theory and practice, observe the successes and failures of certain procedures and decisions, and make sense of the myriad pieces of information dispensed in courses. Well organised internships in libraries and other information agencies should help a future information professional to understand how institutions and functions relate and how decisions in one area affect the operations of the libraries and other information agencies as a whole.

Much as we might like to think that teaching helps the student know how an information unit works in any given situation, it is only when applying knowledge and skills in complex situations, that such objectives can be achieved. The day-to-day living of a process is a better teacher than any explanation of such a process within the confines of a classroom. No matter what types of assignments may be given to mimic or represent the real experience, in the end, only being there and participating will ensure that the student receives what he or she needs to know.

Library educators are often concerned that practice-based training focuses on the obsolete, and that in order to cope with the rapidly changing technologies and managerial models, a broader and more theoretical approach to professional library education is needed. However non-traditional placement and practical training can be seen as a way to blend the big picture with exposure to the practical concerns of work.

LIS educational institutions should be more aware of practitioners' views and expectations. In her article, Moran states that positions are hardening in the growing rift between the educators and the practitioners in the library field. Many practitioners are convinced that the library and information science (LIS) schools have either abandoned educating librarians or that they are not educating them well (or both) (Moran, B.B. 2001).

A special emphasis is given on cooperation between educators and successful practitioners. All possible aspects of this cooperation are reconsidered. Successful and well organised praxis of the students in the time of their studies is one of the elements which have been slightly pushed aside when we were striving for proper competencies and skills for the future librarians/information professionals. Proposed solutions were developed under the influence of experience, where praxis are well interwoven in study programmes and practical work important part of the study programme.

Curriculum is transformed according to actual changes in the society and it’s information needs. Academics are under double pressure. Firstly to have a curriculum build under the academic standards. Secondly is the fact that today's employees increasingly expect students to leave the university prepared with the specialized skills and knowledge necessary to join the workforce with minimal additional training. Once employed, students are expected to keep current by becoming continuous, life-long learners in their respective fields. Placement and practical training as an integral part of the curriculum should ease the pressure.

Dublin descriptors and the Lisbon strategy

A problem oriented approach in teaching methods is important to develop competences as mentioned in the Dublin descriptors and Lisbon strategy for developing enterprise education including coping with change. Outcome of professional education: competent professionals who are able to exercise the required expertise as well as adapt to the

behaviour of their surroundings. Of course these are changing and information professionals must be proactive in improving their level of expertise.

More and more managers and directors are discovering that it is crucial to have a harmonious group of employees, where attitude and behaviour is concerned. The search is on for people who are not only good at their job, but who can also fit into a team and can adjust their attitude/behaviour to any particular situation or set of circumstances. To put it into theoretical terms: companies seek competent professionals. It used to be that graduates should *know* a lot, but nowadays they are expected to be able to *do* a lot as well.

The Bologna perspective implies a conception of the education as an active process in which the students adopt the protagonism of the learning process and the teaching methodologies are designed according to the competences to be acquired.

In addition to the acquisition and transfer of knowledge, the development of analytical and interpersonal skills should be stressed. The ability to anticipate and adapt to change, the merging of knowledge and abilities and theory with practice are important cornerstones of the educational philosophy.

The Dublin descriptors include:
- knowledge and understanding
- applying knowledge and understanding
- making judgements
- communication skills
- learning skills

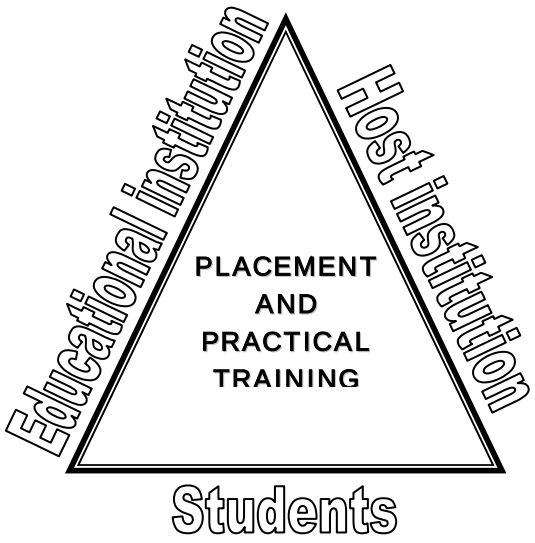
(see appendix for more information about the Bologna process and Dublin descriptors).

An internship is an excellent opportunity for students to learn or further develop their personal and interpersonal competences, and it also requires students to pay attention to a number of professional competences as well.

Which particular competences are tested or developed and to which extent this testing or developing will occur depends on circumstances (the company providing the work placement, the assignment and the particular direction the student is headed within the field).

The triangle of stakeholders

In defining that the educational aims for the student should be the most important, but not the only ones. As to show these an ‘umbrella vision’ should be compiled by using the triangle of stakeholders involved in identifying the added-value of work placement, practical training and applied research.



During an internship or the writing of a thesis, the emphasis is on problem oriented learning with an increasing emphasis on student-centred learning.

Main objectives for the *student*:

- to acquire knowledge and insight into ways in which his knowledge and analytical skills can be applied in practice; to select and apply appropriate research methods
- the development of personal and interpersonal competences; entrepreneurial and management attitudes and skills, including the ability to work in a team
- to become aware of the professional world and its infrastructure
- to be able to acquire positive professional ethics
- the need to be aware of their capabilities
- to learn how to learn from experience
- to increase employability by gathering evidence of experience.

The added value for *host institutions* can include:

- stimulating effect of a student with an open eye asking questions
- a source for information about new trends and developments
- placement as a selection tool for vacancies
- an extra person with problem solving skills to take on some work load
- and above all to help foster successful professional development for the LIS field and their organisation.

Opportunities for the *educational institution* can be:

- interaction between teaching staff and practitioners
- to obtain material for case studies and research projects
- to attract guest lecturers

- a stimulus for innovation of courses.

Internships can have a positive influence on a healthy relationship between the stakeholders of the triangle. To foster realistic expectations:

- host organizations should clearly state what they want and what their needs are and what they have to offer students
- students should clarify what they want from the internship experience and what they have to offer
- the educational institution should clearly set her standards for an internship or practical related work and be clear about the support that can be offered.

The internship in more detail

The Bologna perspective implies a conception of the education as an active process in which the students adopt the protagonism of the learning process and the teaching methodologies are designed according to the competences to be acquired.

Although placement is a core subject in many curricula, it is not defined by its contents; it is characterized by a problem-oriented methodology. Placement is a space of autonomous learning. Outside the university, the students have the main responsibility for their learning process. It will be up to them to realize the potential of the situation and to take advantage of it. The function of the academic supervisor and the-on-site supervisor remains always in a second place, just to ensure the basic conditions or to solve problems that can arise.

This methodological approach grants relevance to general and personal competences. The student oriented learning will further develop the self-organization capacities, autonomy, initiative and decision-making. The adaptation to a new environment entails the development of empathy, flexibility and sensitivity for detecting needs. The particular situations favour that students adjust their attitudes for fitting in the work team and improving their interpersonal communication abilities. The entrepreneurial and management attitudes and skills will have a greater significance for the graduates in getting a job. The employment market searches for people who are not only good at their job, but who are also self-motivated and flexible, who know how to make decisions and to communicate them to the work team, who are creative in their proposals.

Another significant contribution of placement is to help students to test their capabilities in specific fields of activity. Working in an organization is a good way for the students to be aware of what they are capable of, to realize in which tasks they feel more comfortable and thus to consolidate their career choice as an information professional.

Taking the perspective of the LIS schools and of the academic staff involved in internships organization and students surveillance, the regular contacts with libraries and information units in organizations can provide useful information in identifying the

professional competences required by the changes implemented in local institutions, in selecting which methods, models and theories would be more suitable for facing the present challenges, and also in finding examples to illustrate concepts and categories in the classroom. Thus placement strengthens the links with the professional world and it becomes good means to keep up to date and avoid the danger of loosing contact with reality.

Aims and objectives may differ depending on the placement model applied in each university. The organizational aspects such as the duration of the period, the semester in which it is located, the kind of surveillance, the assessment methods, but also other defining elements such as the number of students per period and the availability of library and information units willing to host a trainee will have a strong influence in the aims and objectives fixed by the educational institution. Placement in all studies has a double essence: a complementary role to the theoretical approach to knowledge and skills of the field, and a lived experience in the professional and labour world.

Taking the first point of view, placement can be seen as a quality requirement that gives a global dimension to what the students have already learned. The immersion in a real context allows the student understanding through observation and making sense of the knowledge and skills scattered in different subjects of the previous courses.

On the other hand, working in a library, the student will gain insight in the host institution's organizational framework, the established forms of internal communication, its cooperation lines with other libraries, networking centres and, at a broad level, with social, cultural or educational agents. The relevance of professional ethics in the information society and knowledge economy also deserves special attention.

Although most of the curricula cover the principles of freedom of access to information, intellectual property rights and trade-related aspects, electronic filters or other issues, the real life-working context allows the student to appraise the values of privacy, authenticity, confidentiality and to acquire positive ethics through situations regarding users, other members of staff, external organizations and collections.

Enhancing the educational value of internships

To enhance the benefits of the internship, it might help to pay special attention to different aspects of organising internships. Following are some suggestions.

Setting clear objectives in relation to tasks and activities

Derived from the main objectives more concrete goals can be set. Student should play an important part in the analysis of the competences they want or need to develop.

Main objectives such as:

- to acquire knowledge and insight into ways in which their knowledge and skills can be applied in practice
- to select and apply appropriate research methods
- to improve methodological and analytical skills

- the development of personal and interpersonal competences and entrepreneurial and management attitudes and skills
- the ability to work in a team
- capacity for interaction with information users and clients
- capacity for planning, problem solving and decision-taking

- to become aware of the professional world and its infrastructure
- to be able to acquire positive professional ethics
- the need to be aware of their capabilities
- to learn how to learn from experience
- to increase employability by gathering evidence of experience.

To support reflection and learning "how-to-learn" from experience, academic assignments, including research, can play an important role. Components built into the placement programme, depend on the diverse organizations. In addition to participating in the daily affairs, specific projects can provide students with an in-depth experience which can broaden their capacity to understand the art of the information profession.

Participating activities to gain "hands-on" experience in information specialists' tasks and other small assignments, are a good way for student-trainees to familiarise themselves with the workings of a library or an information unit within a company.

Some examples:

- survey of the information needs of target groups
- survey of the services provided by the information agency
- design, planning or evaluation of user training facilities
- assisting in the running and evaluation of programmes for various user groups

- analysis of the relationship between the information unit and the company and its surroundings.

Some suggestions for specific projects:

- update the set objectives of the library
- proposal for identification and evaluation of information resources
- develop an intranet for staff
- develop proposals for improving the existing user interfaces
- proposals for selecting a document management system
- develop a clearing house of WWW resources for a special target group
- develop new categories in thesauri
- develop and implement a concept for events, schemes to promote reading/media skills or use of the internet.

Policy and criteria for placements

Requirements can be set as well for students as for host institutions.

Entrance requirements for *students* can be:

- all first year courses must be passed
- certain number of credits is required (from the main phase) and/or some specified courses
- a Personal Development Plan should be prepared.

Criteria for *host institutions* can be:

- diversity of activities and responsibilities
- innovative projects
- adequate supervision and feedback from an experienced information professional
- interest in educating a new generation of professionals
- facilities available such as a computer and desk.

The structure of the placement

There are certainly different opinions at which point in the curriculum placements should occur, as well as the duration:

- “in the middle or at the end” or “divided from the first year on”
- students should have some basic knowledge to get as much as possible out of their placement
- on the other hand first year students might need an introduction to concrete situations to get a better idea about the profession
- what do host organizations expect? After the introduction, students should be capable of contributing some work to create a win-win situation
- how long a placement should last, depends on the planning of the practical work throughout the course

- you might be in favour of a semester long placement so that students really can get involved and get a more in-depth experience.

In some countries the duration of an internship will also depend on legislation and rules of the university.

Some thoughts about the structure of the *supervision*.
The involvement of the school can be different:

- a more autonomous learning by the student himself or
- a more guided approach to support the student
- on-site visits by the academic supervisor
- in between sessions with a group of students to compare their experiences
- setting up an e-learning module in which students and teaching staff can discuss problems the students encounter
- guidelines for analyzing, reporting etc.

Preparation issues

Again the stakeholders in the triangle should be taken into account discussing the necessary preparations.

When preparing *host institutions*, one can think about the following:

- written materials/guidelines covering the curriculum and the internship
- communicating changes in the curriculum
- expectations of on-site supervisors
- a booklet offering an overview of previous work place assignments
- organizing workshops to share experiences and request suggestions for improvements

Preparing *students* can involve:

- workshops on subjects such as applying for a placement/assessments/developing a Personal Development Plan
- job interview training
- advising students to select the right institution/assignment in order to meet their expectations.

Preparing *academic supervisors* can be done by:

- written material/guidelines for placements
- clarifying what to expect from the academic supervisor
- organizing workshops to share experiences to improve processes and products and to discuss new trends in the information field.

Evaluation and assessment

A structured approach will be needed to improve and maintain the added value of internships. Therefore students, host institutions and staff members evaluate:

- the placement itself
- the entire process
- role of the supervisors
- coöperation between the three parties
- evaluation of the host institution.

In addition to this:

- evaluation of the (progress of) the student (by the host institution)
- assessment of the student's report by a staff member to verify the quality of the work
- students reflections on their experience.

Openness for the European dimension

Internationalization has become a permanent feature of education in many European countries.
The importance of international work placements is also becoming more widely recognized, together with a growing need for international placements of a high quality.

Aims and objectives

International placements enable students to develop specific competences which they would not have been able to acquire in any other way. An international work placement should be seen as an educational experience, an integrated part of the course.
The aim for any placement for students is first, to apply in practice knowledge acquired on study programmes and second, to enhance professional skills. This applies just as much to international as to domestic placements. The added value of an international placement lies in its international character. It is essential to combine the specific educational aims of the LIS course with the more general aims relating to internationalization. These general aims can be formulated in more concrete terms such as a greater insight into another culture, to improve skills in intercultural communication, learning a foreign language. Students get the opportunity to put information needs and organizational structure in an intercultural perspective.

Key factors for the institution

Different factors will influence the benefits of a stay abroad. To assure the quality of international work placement as an integrated part of the study it is suggested that:

- a policy on international work placements needs to be formulated

- the added value of internationalization needs to be converted into concrete objectives for the internship
- it should not occur too early in their study since a sufficient knowledge/skills base is required to carry out the placement successfully
- the duration of the placement is a minimum of at least three months. If it is shorter, students will not have the chance to take enough in. They will have to leave almost as soon as the period of acclimatization has finished.
- choice of countries and organizations can be based on a number of concrete aspects such as new developments in a certain area of expertise, employment opportunities, or historical ties
- intercultural training for academic supervisors to enable them to better prepare students for the specific codes of conduct and customs of the host country
- the organization and supervision of international placements will probably result in higher costs.

Preparation for students

The success of an international placement depends very much on the preparation. In addition to preparing for the educational objectives of an internship students also need cultural and social preparations for a stay abroad.
Actions concerning the following points could be necessary:

- to improve the language proficiency; sufficient command of the language of the host country will be necessary for the day-to-day life and the activities at the work placement. Language courses do help for the day-to-day life, but are often not adequate for working in an information unit. Looking for places in an international environment where English is the working language could help a number of students
- workshops in intercultural communication skills to prepare students for cultural and social differences and to increase appreciation of other cultures and environments
- insufficient knowledge of the institutional framework and structure of the information services will hamper the student's work. Students will get less support from the home institution when abroad compared to students staying home. It would help to place the student in the care of a local partner school. Parallel internships would offer the student from abroad the chance to meet other students to work with and to socialize with.
- to organize information meetings with students who have already completed an international placement and foreign students studying at the institute.

Offering internships abroad will certainly stimulate the mobility of students.
LIS schools can help each other to find interesting placements for students, take over (part of) the supervision and be of help to overcome some other problematic matters, through greater cooperation.

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Appendix

Dublin descriptors

The Bologna process aim is to achieve transparency in higher education programmes. The identification of first cycle programmes (Bachelors), second cycle programmes (Masters) and doctoral studies are a step towards an over-arching qualifications framework for the European Higher Education Area.

The Dublin descriptors offer generic statements of typical expectations of achievements and abilities associated with awards that represent the end of each of a Bologna circle. The Dublin descriptors focus the concept of competences. The word competence is used in its broadest sense, allowing for gradation of abilities and skills.

The competences include:

Knowledge and understanding

1. (Bachelor) [is] supported by advanced text books [with] some aspects informed by knowledge at the forefront of their field of study

2. (Master) provides a basis or opportunity for originality in developing or applying ideas often in a research context

3. (Doctorate) [includes] a systematic understanding of their field of study and mastery of the methods of research associated with that field

Applying knowledge and understanding

1. (Bachelor) [through] devising and sustaining arguments

2. (Master) [through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts

3. (Doctorate) [is demonstrated by the] ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity … [is in the context of] a contribution that extends the frontier of knowledge by developing a substantial body of work some of which merits national or international refereed publication

Making judgements

1. (Bachelor) [involves] gathering and interpreting relevant data

2. (Master) [demonstrates] the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete data

3. (Doctorate) [requires being] capable of critical analysis, evaluation and synthesis of new and complex ideas

Communication

1. (Bachelor) [of] information, ideas, problems and solutions

2. (Master) [of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue)

3. (Doctorate) with their peers, the larger scholarly community and with society in general (dialogue) about their areas of expertise (broad scope)

Learning skills

1. (Bachelor) have developed those skills needed to study further with a high level of autonomy

2. (Master) study in a manner that may be largely self-directed or autonomous

3. (Doctorate) expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement

12 Library Management

Ursula Georgy
Aira Lepik
Ramune Petuchovait

Introduction

Initially this chapter was planned to go under the title "Library management and promotion", though after intensive discussion of the authors during the workshop in Copenhagen, it was decided to have a more generic title "Library management", that would cover a wide range of knowledge and practical skills areas, which are necessary for an information professional to function in ever changing library service organizations.

However, we do not claim providing here the full picture of the library management discipline's structure and content within the LIS curricula in Europe period! Though the scope of the project requires binding our discussion to European dimension; but it is impossible to separate education for library management in Europe from international or global tendencies. Rather we present an accumulated knowledge and experience on teaching the library management related courses in at least three higher education institutions – Cologne Fachochschule, Germany; Tallinn University, Estonia; and Vilnius University, Lithuania. We appreciate the input of our colleagues who took a part in virtual or direct discussion assembling the framework of library management discipline within the LIS curricula.

Talking about *management* we refer first of all to the theory and practice of managing social organizations, functions, roles and skills of coordinating of the resources in order to accomplish the ultimate organizational goals. Thus the management discipline comprises diverse knowledge areas and skills that are necessary for the organizational success – performing classical managerial functions such as planning, organizing, controlling, coordinating and directing, but also managerial knowledge and skills in marketing, change management, communication and negotiation, understanding the legal issues of library and information services, library statistics and quality management, etc. Secondly, we talk about managing a library – an organization with a distinct task of recorded information management and services, and certain characteristics that influence the managerial practice. Hence we use *library* as generic term encompassing a variety of organizational forms of information services – public, academic and special libraries, information centers, information resource centers, information units, knowledge resource centers, etc. – that may function as independent organizations or as units within a bigger organization.

Positioning library management in the LIS curricula

Starting with the analysis of library management as LIS educational discipline we shall admit that it had not been in the traditional library education curriculum, which focused on providing understanding and practical skills to deal with the documents in the library – to acquire, to classify, to organize, to lend, etc. However, during the last 10-15 years management became a fundamental part of LIS education and this is due to the transition from pure vocational education / training discipline towards more academic, intellectual education, and from document management in the library approach towards perspective of information management in the less defined context. An expansion of so called information market made LIS graduates, once bound to the libraries as main employment place, pursuing their careers in variety of contexts – consultancy, finance, law business and government, etc. This lead to the tendency of many LIS schools worldwide to offer more generalized education programmes, made of set of universal and special disciplines in order to increase employability possibilities of their graduates. Another side of this tendency is spin offs programmes, such as business information management and knowledge management, provided by LIS schools in cooperation with the other university departments. The full picture of the LIS curricula we shall leave to other chapters of this book, but it seems that the complex of information, technology, management and policy related competencies is what makes the most wanted librarian / information specialist today by the prospective employers.

Following snapshot of the literature reveals that today there is principal agreement between practitioners and education that the management principles and managerial skills are important in current library world and should be a part of formal library and information education.

A study of 44 graduate LIS programs in USA revealed that management is among 14 main knowledge and skill-based competences taught in the programs (Beheshti, 1999). Gorman standing in a librarian and employer position emphasizes management as a key subject that allows preparing to manage and administer libraries, including broader understanding of the library services, staff and environment in which libraries exist. He also draws attention to the need for education on types of library differences, what strongly relates to organization aspects of library and information services.

A recent comparative analysis of library related job ads in Australia and the United States of America reveals knowledge fields and skills required by employers from applicants, management and management related disciplines among the others. This complements position of professional associations:

IFLA Guidelines for Professional Library / Information Educational Programmes (2000) lists *Management of Information Agencies* among 10 core elements of the LIS curricula.

Special Library Association's (SLA) newest edition of Competencies for Information Professionals of the 21st Century (2003) states 4 major professional competences:

A. Managing Information Organisations;
B. Managing Information Resources;
C. Managing Information Services;
D. Applying Information Tools and Technologies.

In addition to these competences a great importance is put on personal attitudes, skills and values as well as to understanding of the value of developing and sharing ones knowledge and commitment to the professional ethics.

Similar position is revealed in the European discussion on development and structure of LIS education. T.D.Wilson (2001) proposes 4 fundamental building blocks fields for information studies, LIS as part of it, curricula – content (A), systems (B), people (C) and (D) organizations, where organizational management evolve in the intersection of the last two fields. This model is applied by Juznic and Badovinac for analysis of LIS study programs in the new member countries of European Union, the findings reveal wider or lesser representation of courses from both C and D subfields.

Audunson et al (2003) while modeling the Nordic library education refers to the concept of a "complete librarian" who also possesses knowledge of library management. Finally, the findings of most recent European LIS School Survey, presented in this book (chapter 13, p. 232-241) shows that Library Management is a constituent part in 48 of 50 (98 per cent) LIS curricula and in 38 (81 per cent) is considered as core subject.

Taking as standpoint the common definition for the information management as "the application of management principles to the acquisition, organization, control, dissemination and use of information relevant to the effective operation of organizations of all kinds", and referring to the discussion above, we propose a statement that management knowledge and skills is absolutely necessary for information practice, hence representation of this discipline in the LIS education program is a basic requisite of quality.

Turbulence of library practice in recent years made library management courses well demanded on the level of continuing professional education and training. Thus fee-based Continuing Professional Education (CPE) courses in management may be developed by LIS schools in order to meet needs of professional community; it is also may be an invaluable source for additional income.

Mapping managerial subjects in LIS education

In this chapter we present a brainstormed cluster of management and related subjects that might be relevant to consider including in LIS curricular, however we emphasize that our proposal is an incomplete and indicative list rather than one best solution of design, structure and content for European LIS education. We have no ambition, nor do we feel being in a position of claiming this. Following mind map of library management related subjects (figure 1) and some speculation on possible content and structure of each of

them, we hope, will serve as a tool for critical reflection on management discipline within the LIS education. We argue that in each case the solution will be determined by the education system structure, historical tradition and other reasons.

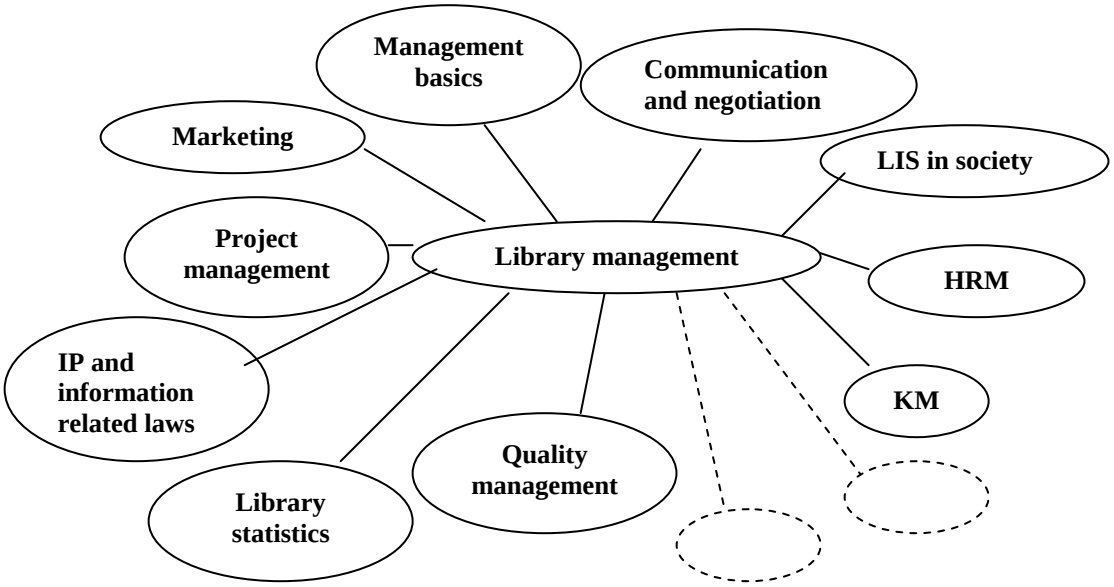


Figure 1. Incomplete mind-map of the library management educational discipline

Library management basics

It is the compulsory course in BA level program, and gives an introduction to main principles and tools of management in libraries and information organizations. Possible outline of the course:

1 Theoretical perspective**:** General management theory and history of library and information service management;
2 Understanding the library manager's job: management roles and functions, manager's competencies and skills, social responsibility and ethics.
3 Library management concepts and tools: Planning and strategic management, Change management and organizational innovation, Organizational design and library structures, Human resource management, Motivation and Leadership, Organizational communication, Quality management, Control and budgeting, Learning organizations, etc.

Marketing

This course may be taught either on BA and MA level depending on the curricula design and requirements. The teaching goal of the subject is to analyze the possible implementations and the need of marketing principles in library and information work.

The students acquire the knowledge on marketing processes and experience to compile the library or other information centre marketing plan.

The competencies and skills acquired

1 The ability to evaluate on what level the library services satisfy the users needs;
2 The ability to design the library services that meet the users demand;
3 The ability to position the library in marketing environment;
4 Knowledge and skills for planning and carrying on the marketing communication of the library and its services;
5 Knowledge for implementation of marketing possibilities in different fields of library work;

The subject content could be divided in modules that consist from sub-topics.

Module I. The basis of marketing and its implementation fields.
The module consists from the topics where the students get the overview of the marketing goals, tasks, and its basis, content and implementation fields.

6 Marketing: the concept, goal, basis, tasks. Marketing as philosophy and function of management. Fields of using marketing. The content of marketing. Marketing functions. Teaching marketing – need and multi-levelness.
7 Marketing: main concepts and terms, basis, need, fields of activity.
8 Marketing in services. Relationship marketing. Analysis of Gronrose concept. Marketing in non-profit field – the marketing of non-profitable organizations. Marketing and library marketing: the analysis of the concepts since 1970-s to the beginning of 21st century. Library marketing as a marketing of organization or service marketing.

Module II. Planning the marketing
The module is composed of the topics where the students analyze the marketing situation, the possibilities to manage the market demand and library as an organization.

9 Steps and cycles of marketing process. The mission of the organization, its vision and goals. The market position of the organization, the defining analysis – SWOT & PEST.
10 Marketing surveys for carrying out the marketing processes. Primary and secondary surveys for gaining market information. Market information as internal and external organizational information. Prognosis of demand.
11 The market's concept and content. The ways of entering the market. Segmenting of the market. Usefulness, strategies, requirements of segmenting. Indicators of segmenting. Library and library services market.
12 Analysis of library market position: the marketing information from the library. The analysis and evaluation of library condition. The library marketing position using different analyzing techniques. Analysis of internal and external restrictions of the library.

Module III. Marketing mix in library
The module consists from the topics where the students get an overview on marketing mix or compiling marketing collection and designing of library offer.

13 Marketing mix "4P law and its development". 4 Co law. Marketing environment (micro and macro environment). Analysis and diagnosis of the environment.
14 Service as a marketing measure in library marketing. Life-circle of the service in library. Expected and actual service quality. Methodology of service quality analysis SERVQUAL, LibQUAL+.
15 Price as a marketing measure in library marketing. Price as a payment for using services. Price as a balancer of exchanging process. The main basic for the price design (expenses, demand, and competitiveness). Main factors of price designing. Using of cost-based price methods in defining the price of service in library.
16 Market place as a measure in library marketing. Library as a market place and environment. Market place - the choosing of market channels and management in library marketing.
17 Promotion as a measure in library marketing. Marketing communication: advertising, sale promotion, public relations, direct marketing, event marketing. Confidence and reputation in the library marketing process. Characteristics and motivation. Library company style and main elements.

Marketing information services

This course may be taught either on BA and MA level depending on the curricula design and requirements. The goal of the subject "Marketing of information services" is to analyze the adjustment possibilities of marketing theory in the marketing of information services being focused on relationship marketing and analyzing marketing strategy implementation in creating and assuring of competitive advantages.

There could be different topics in the subject content that are divided in three modules:

Module I. Service and information service as a marketing measure

1 The service concept and systematic;
2 The impact of the service specifics on marketing activity.
3 Services complex and principles of its design.

Module II. Marketing of information services as relationship marketing

1 Formation of relationship marketing.
2 The main processes of relationship marketing.
3 Marketing of information services as implementation of relationship marketing.

Module III. Marketing strategies of information services

1 Analysis of information services market position.
2 Marketing strategy and basics for its choice.

3 Strategies in Porter's concept (strategies of expenses advantages, strategy of differentiation and focusing).
4 Marketing strategies in achieving the goals of marketing.

Communication skills and negotiations

This is a compulsory BA level subject aiming at developing an understanding of human communication process and practical skills of written and oral communication.

An outline of the course:

1 Communication process, types and channels of communication;
2 Issues of effective communication;
3 Oral and written communication in a workplace;
4 Communication with the customers;
5 Intercultural communication;
6 Conflict management: sources and types of conflicts, conflicts resolution strategies;
7 Negotiation process and skills; contract negotiation.

Library and information services in society

It is a compulsory subject in BA level. The course provides and overview of the organization of library and information services as a wider social system.

Policy framework: European and national policies, globalization trends. An international guidelines for libraries.

Legal framework: constitutional provisions, national library laws / acts, legal deposit, copyright and public lending rights, etc. National programs for library development. International and national standardization of library and information services.

Structural framework of LIS: National library system, library tasks and functions. Public library authorities and development, coordination and cooperation issues.

Qualification framework: Library / Information professionals' accreditation system, overview of formal education and continuing professional education structure.

Networking framework: professional associations, national electronic library projects, etc.

Intellectual Property and Information law

For some years already practitioners discuss that the legal environment of library work become more and more complicated, so this course is compulsory at the BA level. To some extent this subject extends the knowledge developed by former one, and may cover following areas:

Intellectual property considered the following different rights: patents, trademarks, design patents and copyright. The early history of patents dates from the 15th century. The term intellectual property occurs in the 19th century in Europe.

A *patent* is an exclusive right granted by a to a person or organisation for a fixed period of time of certain details of a device, method, process or substance which based on an invention.

A *trademark* is a distinctive sign of some kind which is used by a business to identify itself and its products and services. Usually, a trademark comprises a name, word, phrase, logo or symbol, image, or a combination of one or more of these elements. The main function of a trademark is to act as an identifier of the commercial source or origin of products or services and to distinguish the products or services of one business from those of another business. Therefore trademarks are most important for branding and marketing.

Design patents consist of the creation of a shape, configuration or composition of pattern or colour, or combination in two- or three dimensional patterns containing aesthetic value.

*Copyright*s may subsist in a wide range of creative work of art or science, which include i. s. literacy, music, sound, painting, photography, and software. The copyright is the only right which recently has been made automatic, and need not be granted or obtained through an official registration at the patent office. Patents, design patents, and trademarks on the other hand are industrial rights and known as industrial property and registered at the patent office.

All holders of intellectual property rights have some exclusive rights which affect the whole management and marketing of organisations. The holder can be the only seller in the market for that particular item. All intellectual property rights may be licensed.

Library statistics

This is basic course for BA level LIS program. An information professional should understand rationale and structure of library statistics, and be able apply simple statistical analysis methods, and interpret the data for reporting and decision making.

We propose to include in the course some or all of the following subjects:

1 Statistics application for library management
2 Quality and statistics
3 Types of statistical data
4 Descriptive statistics
5 Inferential statistics
6 Related international standards “Information and documentation”
7 Millenium Study – LIBECON project.

It is most important that students are able to produce and to understand statistical data. They should know how to conduct a survey and how to analyse the results. Therefore the

basics of descriptive and inductive statistics should be taught as a precondition accompanied by the knowledge of a statistical software package.

Quality management

In the context of new public administration, the quality control and assurance becoming a strategic issue in libraries. This is special subject relevant to MA level program. It provides an understanding of quality of library service and theories and tools for quality assurance. The dimensions of service quality are access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles and understanding the customer. This course focuses on qualitative issues of library work and builds on earlier discussed *Library statistics* course.

An outline of the course:

1 Understanding quality;
2 Quality management theories and process;
3 Quality standards and certification (ISO 9000),
4 Quality of Library Services;
5 Customer satisfaction and library services.
6 Techniques for systematic quality improvement.

There are many different techniques to measure customer satisfaction, i.e: transactional surveys, "secret buyer", focus group interviews, service reviews, and total market surveys. The one proposed by Zeithaml and Parasuraman: the gap model is based on concepts of expected and real quality. On this model SERVQUAL technique is based. Other quality techniques include: service blueprinting, vignette-technique, frequence-relevance-method, fish-bone-analysis (Ishikawa), and failure mode and effects analysis (FMEA), etc.

Project management

The course may be taught either on BA and MA level depending on the curricula design and requirements. It provides knowledge and skills for effective project work in libraries. Course subject outline can cover:

1 Project work and management;
2 Basics of project management: time, budget, quality and scope;
3 Project definition stage: tools and documentation;
4 Project planning stage: tools and documentation;
5 Project implementation stage: control tools and documentation;
6 Project evaluation stage: criteria and reports;
7 Group building and teamwork in a project;
8 Fundraising strategies and sources.

After the finishing the course students shall be able to understand the logic of the project work, be able to use project planning and similar tools, and individually or in a group to write a project proposal.

Human resource management

Specialized subject depending on curricular approach might be compulsory or optional on MA level. It provides in depth and systematic knowledge on management library and information staff. Content may cover following topics:

1 General management thought and HRM subject;
2 Library and employment legislation;
3 Workforce planning;
4 Job analysis and specifications;
5 Staff selection and recruitment process;
6 Staff and performance appraisal techniques;
7 Staff training and development organization;
8 Motivation theories and strategies;
9 Leadership competencies and strategies.

Libraries are in a service business, so the professional human resource management is absolutely indispensable for intelligent and high quality services. This knowledge area is closely related with the subjects of *knowledge management* and *change management*.

Knowledge management

A study of library job ads in Australia and USA shows that prospective library based employers seeking professionals rarely define knowledge management as a core area (frequency rank puts this subject into 17 and 18 place out of 18 categories. However the analysis of knowledge management job ads in Britain revealed that employers seeking for KM related positions are starting to recognize validity of information and library education as a specialist knowledge background. Recognizing an expanding market for knowledge management competences and considering the applicability of traditional LIS competencies in the field we suggest considering knowledge management as an additional specialized management subject taught in the MLIS program. Especially if the graduates are meant to pursue their careers in information services in specialist information fields such as business consultancy, finance, IT and communications, health services and government and other specialist sectors. These are the sectors most frequently seeking knowledge management competence as demonstrated by research. In our opinion knowledge about knowledge and tools supporting knowledge environment may feed the tendency of increasing generalization of the education programmes in order to allow LIS graduates to pursue various career pathways.

There is obvious overlap between contents of discussed subjects, proving again that other structuring is possible. But instead of further expanding theoretical exploration of the management discipline in LIS curricula (for this purpose in the mind map we leave blank shapes to fill in), we propose to look at the following real example.

CASE: LIS curriculum in Lithuania

General structure of the curriculum. In Lithuania as probably everywhere the structure of education field is controlled by variety of laws and regulations. Any university level undergraduate program follows the same structure: general education disciplines (not less than 24 national credits and 1/3 of them consist of philosophy/worldview development disciplines), study program fundamental subjects (not less than 40 national credits) and study program special education subjects (not less than 64 national credits, including research project). Students should have possibility to select at least 5 per cent disciplines of a total program scope. Similar requirements are applied for graduate programs.

LIS education:
In Lithuania, professional LIS education can only be obtained at the universities and is offered by two institutions:
1. Library and Information Science Institute, Faculty of Communication, Vilnius University:

- *Undergraduate (Bachelor degree) program: Library and information (full time and part time)*
- *Postgraduate (Master degree) program: Library and information centres management*
- *Doctoral program on Communication and Information, including LIS*

2. Chair of Library Science, the Faculty of Social Sciences, Klaipėda University:

- *Undergraduate programs: Lithuanian philology and librarianship; Library Science (full-time and part time).*

In most cases, except the program Lithuanian philology and librarianship, studies leads to the Bachelor or Master degree in Communication and Information.

Management and related subjects appear in both BA and MA LIS studies in Lithuania. However there are some differences in their status, for example in the undergraduate study level ***Public relations*** *is considered as fundamental subject (it means it is taught in other communication and information study programs like information management, business information management, publishing, journalism, etc.) and* ***Library management*** *is special education subject related only to the LIS program. Examples of other fundamental disciplines are as follows: information technologies, information management, information organisation and retrieval, history information and communication institutions, etc. Following examples of the courses and content refer to the LIS curriculum of Vilnius University.*

Library and Information Studies. BA program.
Duration – 4 years / 8 semesters.
Qualification obtained: Bachelor in Communication and Information.

Library management *Lecturer Ramunė Petuchovaitė*
Academic level: 4th year
Prerequisites: Communication skills, Librarianship theories
Local credits 4
ECTS credits: 4,6
Weekly lectures / seminars: 2
Duration: 1 semester
Examination: written test
Assessment: 1-10 points scale

Main objective is to provide basic management knowledge and skills required for understanding of main management functions of library and information services on broader social system and organisational level. Content is divided into two big knowledge sections:
1. Coordination of Library and Information Services (as in broader social system) – national policies and development programs, legislation and regulation, Lithuanian library systems and networks, organization of LIS professional education and training, national and international cooperation, etc.
2. Library management – history of management thought, library as organization and library management discipline, classical functions and management tools – decision-making and planning, organizing, directing, coordinating, controlling. Application of management concepts in library and information services: strategic management, change management, library as a learning organization, etc.

Selected reading list:
Evans, E., Ward, P. L. Beyond the Basics: the management guide for library and information professionals. New York, 2003.

Johannsen C. G., Pors, N. O. Pokyčių ir kokybės valdymas bibliotekose. Klaipėda, 2004. 203 p.

Jordan, P. Staff Management in Library and Information Work. Gower, 1995. 264 p.

Guidelines on Library Legislation and Policy in Europe. Strasbourg, 23-25 November 1998 - Council of Europe / EBLIDA. Accessed at: http://www.coe.int/T/E/Cultural_Cooperation/Culture/Resources/Reference_texts/Guidelines/ecubook_R3.asp#TopOfPage

Meno aritmetika: kultūros vadyba Lietuvoje / sud. Edmundas Žalpys. Vilnius, 2004. 342 p.

Management changes in academic libraries = Pokyčių vadyba akademinėse bibliotekose : publication of materials, based on Tempus/Phare project UM_JEP-13236-98 activities / compiled by Janina Pupelienė. Klaipėda: Klaipėdos universitetas, 2001. 67 p.

Morris, B. First steps in management / Beryl Morris. London: Library Association Publ., 1996. x ,102 p.

Stueart, R., Moran B. Library and information center management. Westport London: Libraries Unlimited, 2002. xxv, 494 p.

Vadyba / James A.F. Stoner, R. Edward Freeman, Daniel R. Gilbert, Jr. Kaunas, 2000, 647.

***Public Relations**. Assoc. Prof. Audronė Glosienė*

Academic level: 4th year of study
Prerequisites: Marketing, Communication skills (preferably)
Local credits: 2
ECTS credits: 3
Weekly lectures/seminars: 2
Duration: 1 semester
Examination: written test
Assessment: pass/fail

The purpose of the course is to give participants theoretical background and practical training in public relations (PR). The relations an organization develops with its publics are critical to its very existence. The practice of PR can and does take many forms, but basic to all PR is mutually beneficial relationships between organization and its various publics. The participants of the course will study the main concepts and models of PR; relations between the PR and marketing, propaganda, advertising; aims and function of PR, segmentation of publics; identifying and formulation of the message; working with media, tools and techniques of PR.

The course will pay special attention to PR in cultural heritage information sector: libraries and information centres, museums and archives. The participants get acquainted with PR programs in different institutions in different countries and analyze the practical examples.

The students will get insights not only into theory of PR but also will develop some practical skills in managing PR in library and information services. They will learn:

- *To write:*
  success stories
  direct mails

press releases

- *To work with M/S PowerPoint and make presentations*
- *To analyze the image of organization in media*
- *To prepare PR program*

Selected reading list:

Anderson A. H., Kleiner D. Public Relations // Effective Marketing Communications: a skills and activity-based approach. London: Blackwell Business, 1995. P. 36-63.

Beard M. Running a Public Relations Department. London: The Institute of Public Relations, 1997. 149 p.

Black S. The Essentials of Public Relations. London: Kogan Page, 1997. 192 p.

Coote H. How to market your library service effectively. London: ASLIB, 1994. 48 p. (An ASLIB Know How Guide).

Excellence in Public Relations and Communication Management / ed. by James E. Grunig et al. Hillsdale, etc.: Lawrence Erlbaum Associates Publishers, 1992.

Glosienė A. Marketing or Public Relations: A Strategic Choice for Lithuanian Libraries // Adapting Marketing to Libraries in a Changing World-wide Environment: Papers presented at the 63rd IFLA Conference, Copenhagen, September 1997 / edited by Rejean Savard. Muenchen : K. G. Saur, 2000. P. 68-73 (IFLA Publications ; 89)

Jefkins F. Public Relations / revised by Daniel Yadin. 5th ed. London [etc.]: Pitman Publishing, 1998. 294 p.

Keith H. Putting Marketing Ideas into Action. London: Library Association Publishing, 1999. 99 p. (The Successful LIS Professional Series).

Other management related disciplines in the program:

- ***Communication skills** (1 semester, compulsory, 32 hrs),*
- ***Information law** (6 semester, compulsory, 39 hrs),*
- ***Project management** (6 semester, optional, 26 hrs),*
- ***Professional Ethics** (8 semester, compulsory, 48 hrs).*

In addition to in class courses in the beginning of 8th semester students have 3 weeks library management. It is aimed at understanding library management task through shadowing library heads in the range of the library work processes and operations.

Library and information centers management. MA program.
Duration: 1,5 year / 3 semesters.

Due to its emphasis on management the program is full of compulsory and optional management related subjects:

- ***Management*** *(1 semester, 64 hrs, compulsory). It provides knowledge of the development and basic concepts of general management discipline.*
- ***Libraries and Information Centres Management*** *(1 semester, 80 hrs, compulsory). Problem based learning approach is applied in the course. Students are working on selected LIS problem, which at the end of the course is presented in the seminar for wider librarian community.*
- ***Management of Lithuanian research (scientific) libraries*** *(1 semester, 48 hrs., optional). Provides understanding of scientific libraries functions in research information and communication infrastructure.*
- ***Information business*** *(2 semester, 64 hrs, compulsory). Introduces general principles of information business and entrepreneurship in public sector information services.*
- ***Marketing of library services*** *(2 semester, 32 hrs, compulsory). Provides understanding of information services marketing and skills of marketing development.*

Concluding remarks and discussion

Today, the library management discipline has become a core component of the LIS curricula structure. This is conditioned by the general developments of LIS education and the changing field of practice. Management knowledge and skills from one side enable them to perform better in ever changing library organizations, and improves graduates prospects of employability, from the other side.

In theory the scope and coverage of library management discipline is patchy as it embraces wide range of subjects and knowledge areas. Inclusion of one or another subject into the design of real curriculum may depend on level and purpose of the study program, requirements of national education system, traditions of library education, availability of teaching staff, etc. Therefore there is no sense of trying to shape and recommending the one model of educating library management that fits all-purposes and programs.

However in the context of increasing internationalization of the higher education, library management may be seen as favorable discipline in terms of academic exchange, development of joint study programs and applied research. An attempt to reconstruct the discipline's content above reveals that many library management subjects feed on theories, tools and knowledge of general management applied in the LIS field. Tradition of an international cooperation in the library field is yet another source for the

commonalities, especially influential in the subject related with quantities and qualitative measurement of library performance, etc. The perspective of certain unification of the curricular on European level raises also a danger to overlook the cultural issues. In library management discipline there is a knowledge area that more heavily than others depend on the national political and legal frameworks of library services organization in the society. A professional lacking such knowledge may not feel any problems in technical library services, but in public services or higher level, managerial, positions it may cause a serious dysfunction. Language is another important issue that requires careful consideration while developing joint-curricular in LIS, though it is wider than the subject of this chapter.

13 A Survey of Library & Information Science Schools in Europe

Jeannie Borup Larsen[1]

Aim and background of the study

Along with the virtual workshops and the working seminar in August the project coordinating institution carried out a questionnaire-based survey intended to gather information on Europe's LIS schools. The aim of the survey was to explore the following:

- The number of LIS schools existing in the individual European countries
- The size of the schools or departments (number of students enrolled plus staff members)
- Which educational levels apply to the LIS programmes/qualifications offered by the school/department
- The length of fieldwork placements in libraries and other information agencies as part of the individual LIS educational programmes
- The contents of the curricula
- Entrance qualifications
- The organisational affiliation of the LIS school/department
- The school/department's relations with the practical world and the LIS profession
- Involvement in activities that follow the goals of the Bologna Process

Concerning the overall structure of the survey, an electronic questionnaire was sent to the LIS schools in the middle of June 2005. By examining and evaluating the different lists of LIS schools in Europe already in play a survey population of some 200 LIS institutions had beforehand been identified. Among the lists that were used were the web-based directory of LIS schools maintained by the Library of the Royal School of Library and Information Science (RSLIS), Professor Tom Wilson's World List of Departments and Schools of Information Studies, Information Management and Information Systems – Europe, the EUCLID Directory and IFLA's Membership Directory. At some universities, the LIS discipline is today in the process of being re-examined and redefined. Thus, parts of the LIS curriculum are in some countries taught within the academic environment of IT/computer science departments. In the context of the present survey such departments were excluded if the major LIS subject areas were not found to be an integral part of the

[1] Jeannie Borup Larsen is a Master student at RSLIS and served as a project assistant for "LIS Education in Europe".

curriculum along with a focus on “libraries”. In determining the geographical scope of the survey, consideration was given to which countries to be included in the survey. In this context it was decided to not include Belarus, Russia, Turkey and Ukraine.

Around 50 schools answered the survey, which in statistical terms produces a feedback of 25 percent. The chosen time period for the survey could have influenced the percentage of replies since the survey for some schools took place in the middle of the summer break. The contact information was found on the schools’ individual homepages, where many were not translated into English, updated or containing correct contact information. In those cases, the schools were contacted by phone. Of the 154 homepages, where the national language was not English, only 75 were in some degree translated into English. It can be said that this situation leaves the survey highly influenced by the language barrier since questions can be raised about the respondents’ understanding of the survey questions. Statistically seen, however, a 25 percent response rate still gives a good picture of the state and development of European LIS schools.

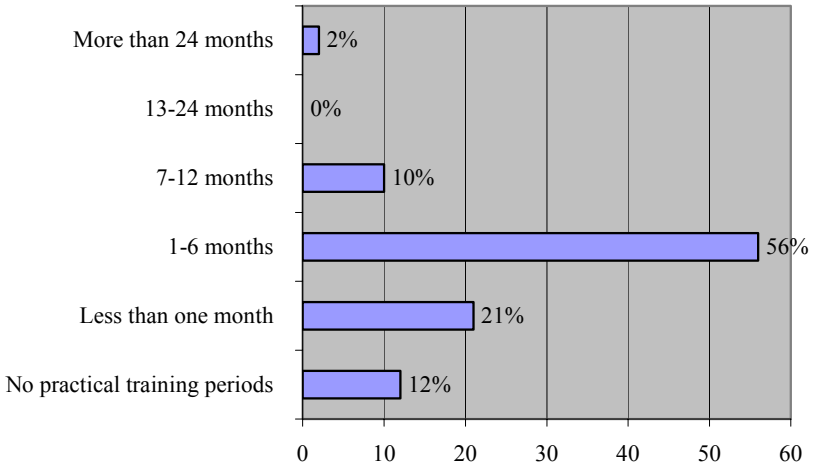
Findings

This chapter is intended to communicate the major survey results by providing an overview of organisational affiliations, curriculum contents, student enrolments, number of staff and LIS schools’ external relations, etc. in condensed statistical format.

Fieldwork Placement

One of the first questions in the survey concerns the length of fieldwork placements in libraries and other information agencies that are a part of the education provided by the respective LIS schools. As shown in the diagram below, the typical amount of fieldwork during a LIS education programme is 1-6 months. Still 12 percent of the schools responding offer no practical training period and 21 percent of the LIS academic institutions offer placement periods of less than one month’s duration.

Diagram 1. Length of placements in libraries and other information agencies



It appears thought-provoking that the development of the European LIS schools seems to be heading towards less time spent on fieldwork placement and more emphasis given to academic education. This can be considered positive in respect to the further development of information science as a scientific field, but one can speculate how it will affect the LIS profession if the academic institutions further distance themselves from the practical world.

LIS subject areas

In order to explore which LIS subject areas are typically included in the LIS curriculum (i.e. taught course units equivalent to a study load of a minimum of 5 ECTS), the respondents were presented with a list of curriculum course themes meant to represent a broad spectrum of LIS subject areas. The EUCLID project steering group has constructed the list of chosen curricular themes on the basis of their general knowledge of the field. The ten curricular themes listed here are overlapping the themes addressed by ten of the workshop groups operating as part of the European LIS education project. In relation to the Bologna Process, it is important to see which LIS schools are at present basing their activities on the same curriculum content, and the respondents were therefore asked to compare with the ten curricular themes listed and check those themes that match LIS subject areas included in their current curricula:

Table1. Degree of overlap of the ten curricular themes with subject areas in the current curricula of responding LIS schools

Information seeking and Information retrieval	100%
Library management and promotion	96%
Knowledge management	86%
Knowledge organisation	82%
Information literacy and learning	76%
Library and society in a historical perspective	66%
The information society: Barriers to the free access to information	64%
Cultural heritage and digitisation of the cultural heritage	62%
The library in the multi-cultural information society: International and intercultural communication	42%
Mediation of culture in a special European context	26%

Table 1 shows that Information seeking and Information retrieval is a fundamental part of every LIS curriculum, and it can be seen that themes such as Library management and promotion (96%), Knowledge management (86%) and Knowledge organisation (82%) are also boasting top percentages. Information literacy and learning (76%) is a growing field, which could also be seen at this year's IFLA conference in Oslo where it was the overall topic of many a presentation. The course subjects concerned with culture: The

library in the multi-cultural information society (42%) and Mediation of culture in a special European context (26%) are included in less than half of the individual curricula. This can be seen as thought-provoking in relation to the current developments in Europe with added focus on European cultural identity and cultural diversity, enhanced European cooperation, exchange of knowledge and mobility. At the same time, we are faced with a constant flow of migration from countries outside of Europe. These influences on today's society do not seem to be widely influential on the substance of the LIS curriculum.

To further explore the amount of priority currently given to LIS school subject areas, respondents were then asked to state which of the ten LIS subject areas listed they would regard as core subjects given in-depth coverage in their LIS curricula. As can be seen in the table below (2), the course subject areas follow pretty much the same order as above with Information seeking and Information retrieval appearing as a core subject area in all institutions' LIS course offerings, but with the culture-specific subject areas represented in a much more marginal way.

Table 2. LIS themes ranked as core subject areas in LIS school curricula

Library management and promotion	81%
Knowledge organisation	66%
Information seeking and Information retrieval	100%
Knowledge management	49%
Information literacy and learning	45%
The information society: Barriers to the free access to information	45%
Library and society in a historical perspective	38%
Cultural heritage and digitalisation of the cultural heritage	19%
The library in the multi-cultural information society: International and intercultural communication	13%
Mediation of culture in a special European context	6%

Other main subjects

To make sure that all relevant subject areas were covered, the respondents were then asked if there are any other main subjects areas included in their LIS curricula. This question produced a very long list of individual course subject areas that capture and reflect the diversity and complexity of the LIS discipline as it stands today. Among those subjects that were most often mentioned were Information Technology (web design), Communication/mediation (libraries), Management (projects/information), Research methods (sociology, bibliometrics, scientometrics, informatics) and Book science. The list thus generated shows that the view of what can be thought of as contained in the core of LIS and the already mentioned 10 "prototype" course areas seems to be very individual. In other words, labels of course units offered by various European LIS schools

in the major fields of the LIS discipline vary quite a bit. Some LIS schools, for example, mentioned “Cataloguing and Classification Techniques” as a main subject area, which many would place under Knowledge organisation. Another example are subject areas called “Information Systems and Services” and "Analysis of Information Systems”, which many LIS schools would now assign to and teach in the context of Information seeking and Information retrieval depending on perspective.

At the experts’ seminar in Copenhagen, this problem was further discussed when it for example became apparent that many thought Knowledge organisation to be a part of Information seeking and Information retrieval. Overall, it became obvious that even though there seems to be a connection between which topic headings we use for the curriculum course units, the understanding and view of sub courses still appears very diverse. In elaborating guidelines for a European LIS curriculum, there need to be a common understanding of the curricular terms and concepts that are being used, or at least a basic consensus on the different significations. Without a shared conceptual framework in LIS and LIS education such guidelines will be open to individual interpretation and the result will not have the anticipated and desired effect. Clearly, this observation seems essential in further discussions on what can be said to constitute the core elements of LIS curricula and in examining the design of LIS curricula from the perspective of the ongoing Bologna Process.

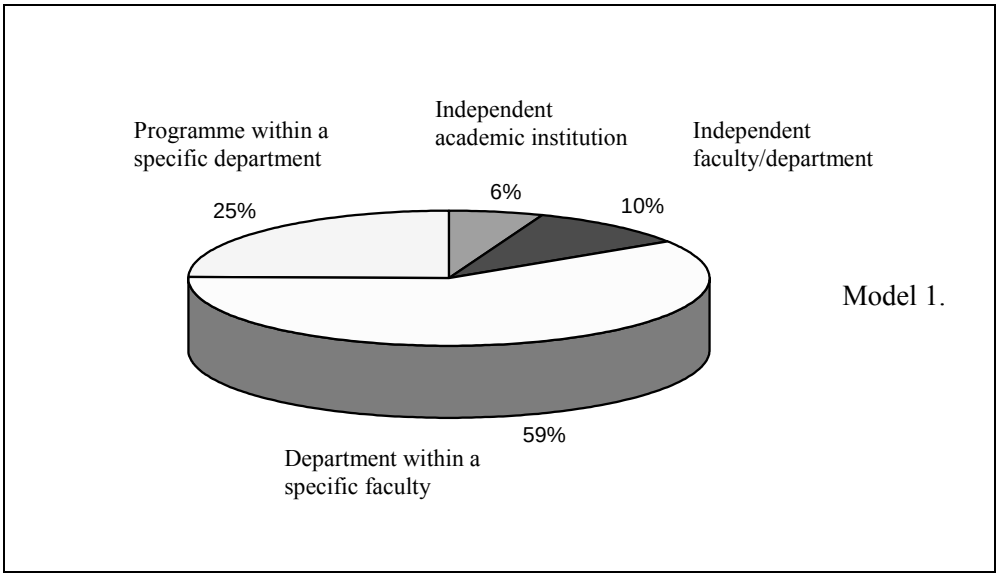
Entrance qualifications

To find out about the extent to which all European LIS education programmes operate on the same educational level, respondents were questioned as to whether admission to the programmes/courses offered by their LIS school/department requires either completion of an education at upper secondary school level (a minimum of 12 years’ teaching) or a course at a post-secondary school level. The results show that 94 percent of the LIS schools require applicants to possess a basic educational qualification (upper secondary school level). This finding provides evidence that LIS schools fulfil a basic requirement for participation in joint mobility schemes in that fundamentally LIS education programmes in Europe are on the same academic level. As long as European LIS study programmes start at the same level it should be possible to strive towards the development of a set of comparable qualifications and degrees, which can serve to promote European LIS professionals’ employability and mobility as well as the international competitiveness of the European higher education system as stated in the Bologna Process goals.

Organisational affiliation

The respondents were furthermore asked to state the organisational affiliation of their LIS school/department. As model 1 illustrates below, 59 percent of the LIS schools function as a department within a specific faculty, 25 percent of the schools operate as a programme within a specific department whereas 10 percent of the institutions have the status as an independent faculty/department and only 6 percent indicate that they are an independent academic institution. In other words, the major trend or pattern for the organisational place of LIS schools in Europe is that they form an integral part of larger educational frameworks/institutional environments.

Organisational affiliation of European LIS schools

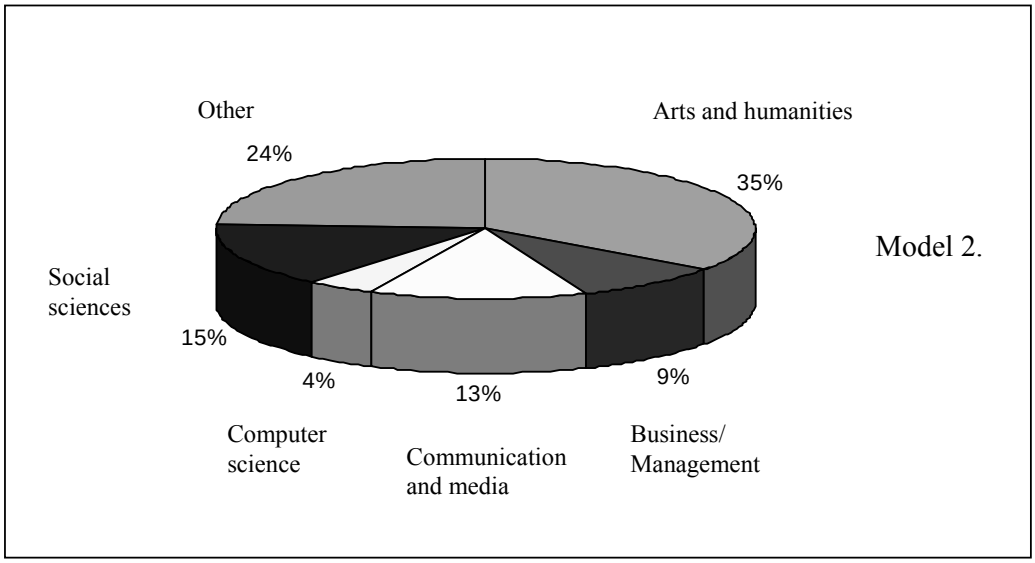


Model 1.

LIS schools within the academic superstructure

To further explore the organisational affiliation of the LIS education programmes, respondents were asked which larger academic unit they belong to if their LIS school is either a department within a specific faculty or a programme within a specific department. As shown below, the LIS educational units are in no way exclusive to one academic superstructure, although Arts and humanities seem to be the most common academic umbrella for LIS schools to be placed under.

The place of LIS schools within local academic superstructures



Model 2.

Those respondents who could not place their LIS educational unit in one of the proposed categories (24 %) were asked to specify their organisational affiliation in greater detail. Listed below in table 3 are the mentioned LIS school affiliations within a specific faculty or – for LIS programmes – within a specific academic department. From their answers it became clear that even though information seems to be the recurring word, the overall thematic or discipline-specific affiliations seem to be very dissimilar, ranging from Computing over Engineering to Philosophy.

Table 3. The place of LIS schools within local academic superstructures: Other disciplinary affiliations

- Computing
- Design, Media and Information
- Education and Information Sciences
- Engineering
- Humanities, Law and Social Sciences
- Informatics
- Information and Communication Science
- Information and Technology
- Management and Information Sciences
- Philosophy
- Science

Some of the participants in the experts' seminar mid-August 2005 in Copenhagen were subsequently interviewed about their experience and the development of LIS in general. One participant made a comment concerning the fact that the field is divided up among many different organisational units all over Europe and that the different academic divisions are funded very differently. For example, Arts and humanities do not get near as much funding as Computer science and Business management do. In other words, the LIS education field is subjected to different financial conditions and could be markedly influenced by existing funding scales because of the organisational affiliation at local universities, etc. These financial resources and funding scales vary across the different European countries.

The current size of European LIS schools

Two variables were used to estimate the current size of the European LIS schools or departments. These were the number of students enrolled (diagram 2) and the number of full-time staff members employed (diagram 3).

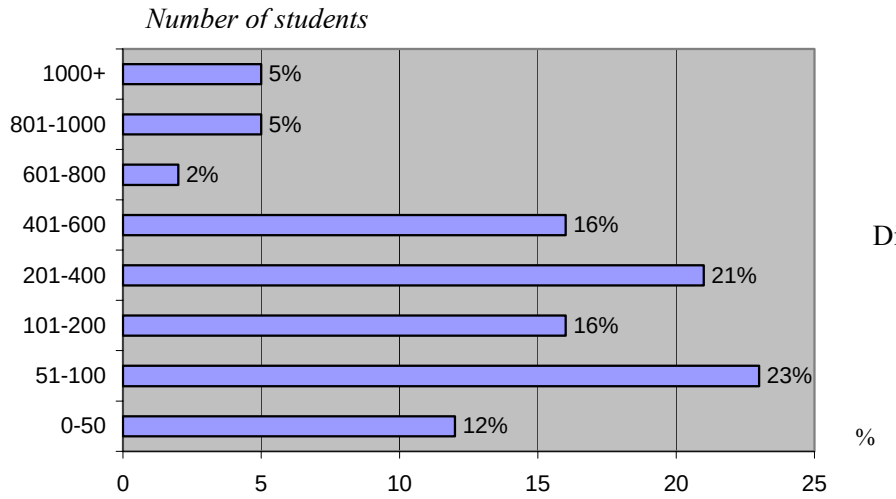


Diagram 2.

Diagram 2 shows that the typical number of students enrolled are between 51-600 students per LIS school. The larger academic LIS institutions as for example the Royal School of Library and Information Science in Denmark with approxemately one thousand students enrolled can therefore bee seen as a minority. It should be noted that quite a few LIS schools seem to be rather small academic units and it appears that around half of the schools responding to the survey (51%) have less than 200 students enrolled.

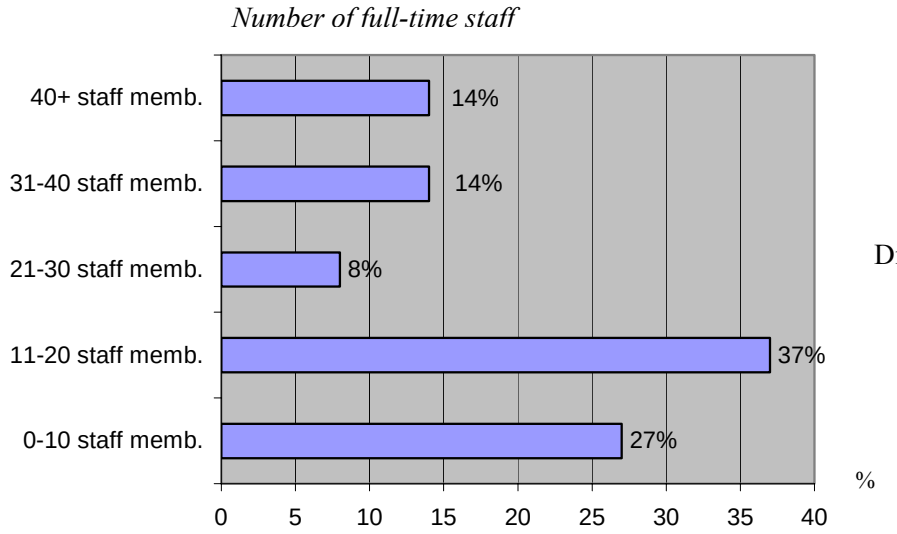


Diagram 3.

The number of full time staff members, as shown in diagram 3, typically ranges between 0-20 employees. The observation that 27% of the LIS schools operate with ten or less full time staff members leaves food for thought and definitely provokes serious questions about LIS school size and capacity that have to be taken into account when discussing European cooperation within the LIS education sector. One could speculate that if a LIS school or department employ that few full-time staff members, then they will have time for little else than performing the day-to-day tasks including teaching and administration

of the school. This means that schools of that size will face problems in fully participating in joint research or academic cooperation projects at the European or international level. A closer examination of the responses relating to the number of full-time staff members revealed that the typical number of supportive staff was in the range of 1-5 persons (73% of the respondents indicated this number of employed support staff).

Relations to the practical world

As for the LIS schools/departments' relations with the practical world and the LIS profession, it would be of great interest to know which forums and vehicles are being relied on for communication. In considering possibilities of enhancing future European cooperation within the LIS education community it would among other things be helpful to know more about ways in which information should be communicated. Findings from the questionnaires administered to LIS schools show that the most frequently used form of communication and interaction is participating in joint conferences and seminars (92 %) with continuing education activities for LIS practitioners (79%) as a close second. Joint liaison committees account for 52 percent and 38 percent of the respondents pointed to the use the different bulletins, newsletters, etc.

Other kinds of relations with the practical world mentioned by respondents include involvement in various professional or learned associations, for example CILIP and IFLA, as committee members or office holders. Furthermore, some of the responding LIS schools indicated that they participate in fieldwork study visits, joint research projects, consultancy activities, etc. and make use of external examiners and advisory boards. They also contribute to listservs and the professional press (in addition to preparing articles for academic journals in our field).

Involvement in the Bologna Process

As a final question the respondents were asked whether their school/department was involved in activities in pursuit of the goals of the Bologna Process: The establishing of a European space for higher education. In addressing this question, 80 percent answered that they were actually involved. It can be seen as extremely positive that so many of the LIS schools are aware of the Bologna Process and seem to be working towards the goals of Bologna. However, you could say that the fact that 80 percent point to awareness of the goals and activities of Bologna should not be taken as a sign that all LIS schools confirming Bologna involvement are strictly following all of the guidelines but only that they aspire to be heading in the direction of the Bologna Process.

Concluding remarks

In summing up the findings of the survey, one observation should be made: It seems obvious that even though European LIS schools have a lot in common we are still very dissimilar. One of the things that became apparent was that although we use the same terms we do not always relate it to the same curricular content. One way to cope with this dilemma would be to encourage further work on the profile and contents of European LIS academic programmes and develop a disciplinary framework that seeks to identify the common understanding of such terms. The question is, however, whether reaching such a

common understanding will be possible along with efforts to further develop our field, its terminology, knowledge structures and academic substance across geographical boundaries. Also emerging from the findings is the impression of the diversity of schools in terms of size, resources and institutional affiliation.

In conducting a similar survey following up on the present study one should keep in mind that the deadline to be set for submitting questionnaire responses could interfere with the different structures of the academic year in European countries. The conduct of the survey and the survey period chosen should take into account semester breaks, etc. Also one should try to take into consideration the language barrier. In this case the reasoning was that because of the wording of survey questions often being very particular, it would not be ideal to translate the questionnaire into other languages. This may not, however, be the case in similar studies in the future.