European Curriculum Reflections
on
Library and Information Science
Education

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1 Library and Information Science Curriculum in a European perspective

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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

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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.
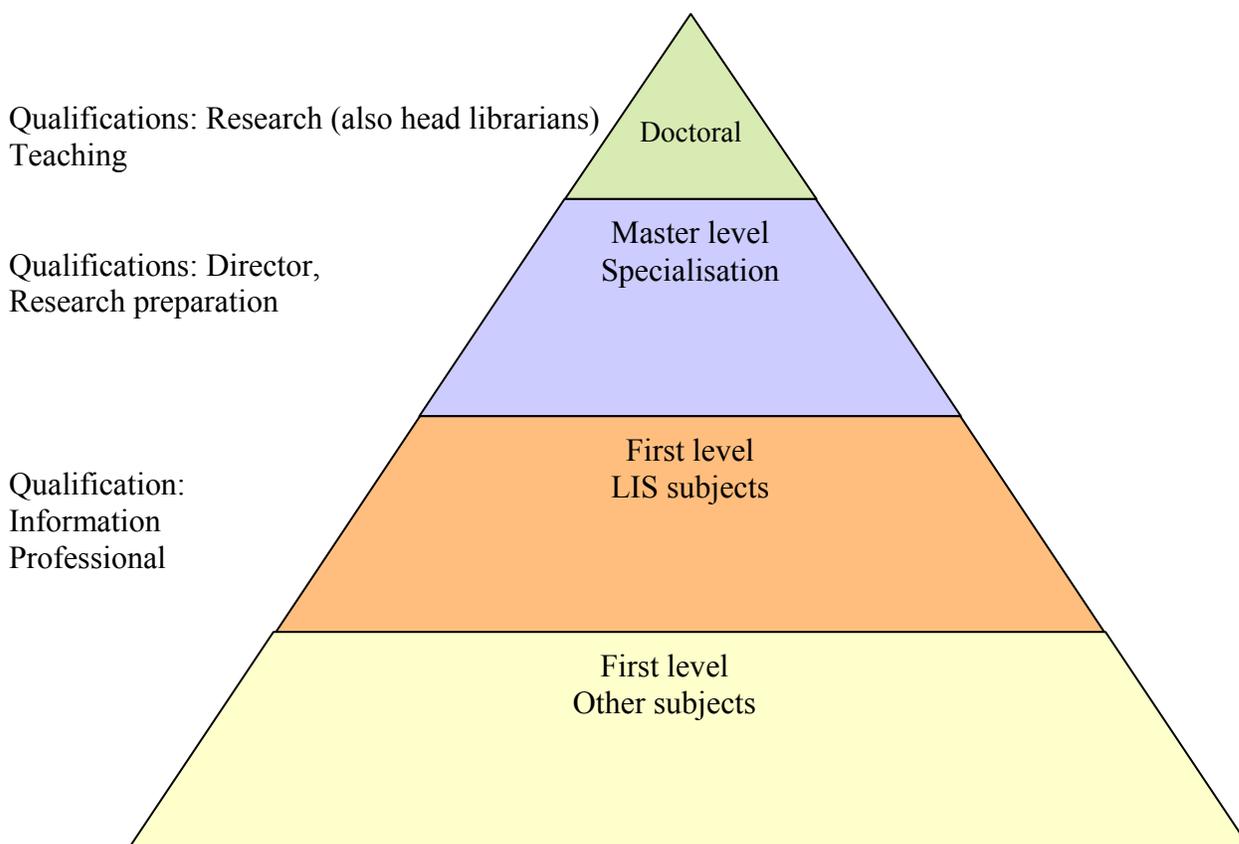
Qualifications: Research (also head librarians) Teaching

Qualifications: Director, Research preparation

Qualification: Information Professional

Doctoral

Master level Specialisation

First level LIS subjects

First level Other subjects

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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