

Performance indicators in Library and Information science (LIS) education: towards crossborder quality assurance in Europe

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Abstract

This paper is based on best practices evidenced by the IFLA survey of LIS schools completed on 2005. It discusses the features, purpose, use and selection of performance indicators in the Library and Information Science (LIS) education sector with a particular focus on Europe and the Bologna process objectives of quality enhancement.

The survey has considered: the assessor or accreditor of the program, the focus of quality assurance, the way to measure performance, the performance indicators and the learning outcomes.

A broad model is used which identifies four points at which indicators can be recorded:

- inputs (the resources used);
- activity/process (the teaching, learning, and management/organisational opportunities and efforts that are applied to the inputs);
- outputs (the results in the education system, which may be seen as intermediate outcomes);
- outcomes (the impact, both direct and indirect).

The survey has shown that, regardless of whether it concerns an institution or programme evaluation, assessment, audit or accreditation, there is a substantial convergence on:

- a common set of standards,
- a similar approach to evaluation process.

It can be said also that quality assurance in LIS is more focused on resources and curriculum design than on learning outcomes and student evaluation .

Further studies are needed for developing an European approach to accreditation and cross border quality assurance.

Introduction and background

Quality assurance is defined as a planned and systematic review process of an institution or program to determine that acceptable *standards* of education, scholarship, and infrastructure are being maintained and enhanced (CHEA 2003). Usually quality assurance includes expectations that mechanisms of quality control are in place and effective. In some contexts, quality control is in the form of standards or indicators, set by the Government or other bodies that oversee the awarding of degrees. The development of performance indicators involves a number of steps, of which the most important is [the indicators framework](#), in terms of their purpose, principles and scope. This framework will provide the structure for the measurement of the set of education indicators chosen and will specify the concepts that one want to measure, as well as the general relationships between the concepts.

In Europe, the framework for evaluation is based on some principles from which the Bologna Declaration (Bologna Declaration 1999) started off. The Bologna process (after the Bologna Declaration in 1999) has put the quality enhancement of European Higher Education Area as the main aim. There is a following cascade effect for quality assurance in Europe that links: a learning outcomes orientation, the selection of appropriate teaching strategies, the development of suitable assessment techniques (Adam 2004). Why have the European ministers decided to achieve this aim? To understand this direction they have taken, we must clarify the fact that the Bologna Declaration and the successive Bologna process represent a reaction to a new opinion of a university education, as a service which follows market logics. This new socio-economic context driving higher education has been created by the approval of the World Trade Organization (WTO 1998) of the General Agreement on Trade in Services (GATS). Quality assurance in Europe (and not only Europe) is labour market driven and, in this era of internationalisation, it focuses on facilitating mobility. The objectives of internationalisation include improving the competences of individual students and also increasing the quality of the national higher education systems. However, internationalisation of higher education could also be dangerous for the consumer, without transparency and accountability. OECD (OECD 2003) provides a summary of the progress on OECD/CERI work on mapping trends in international quality assurance, accreditation and recognition of qualifications. In particular, the OECD forum on trade in educational services describes the work on developing guidelines on consumer protection in cross-border higher education.

How can we combine internationalisation and quality assurance? A first trend, reported by Harvey (Harvey 2003), calls for a uniformity of content and quality measures when establishing international quality assurance. The presumption is that uniformity is important and desirable and thus that all courses should 'cover' the same content. An other approach for quality developments focuses towards the gradual emergence of what is called *zones of mutual trust*, which should guide the internationalisation of quality assurance. The aim is to realise a crossborder quality assurance system, based on national quality procedures. In this approach, quality assurance is linked to recognition and equivalence of qualifications.

IFLA ET Section has been very active in supporting internationalisation and quality assurance in LIS education. The Section has published the *Guidelines for equivalence and reciprocity of professional qualifications* (Fang and Nauta 1987), aimed at achieving greater transparency of professional qualifications and has realised a survey on quality assurance models in LIS programs (IFLA. Education and Training Section and Tammamaro 2005), for increasing international cooperation of LIS schools for quality assurance and accreditation. The last study required an investigation of quality assurance models worldwide, collecting data about current quality measurement, quality assurance systems, LIS guidelines and standards. The methodology has been based on a literary and documentary review and on a questionnaire which has been sent to a selection of LIS Schools.

This paper will try to re-examine the progress and critique of quality assurance in Library and Information Schools (LIS), using the findings of the IFLA survey on quality assurance for illustrative purposes, and considering the implications of these standards in education and training for information professionals in Europe. To do this, I shall attempt to address a number of key questions:

- What is a lead body in choosing performance indicators?
- How are performance indicators set?
- Who assesses the performance indicators of competence achieved?
- What are the implications of this for LIS schools and curriculum development?

1. What is a lead body?

Quality assurance has been considered a strategic importance for LIS schools in at least two approaches:

- 1) the professional associations accreditation of the programme,
- 2) the higher education institutions accreditation of the program.

Strengths and weaknesses of these models have been extensively discussed. Saracevic (Saracevic 1994) speaks of the “iron grip” on library education held by the Committee on Accreditation (COA) of the American Libraries Association (ALA). In contraposition, Gorman (Gorman 2005) affirms that accreditation should be tied to national standards, by cooperating with practitioners in developing curricula.

Many stakeholders are involved in the quality process and this includes an internal and an external evaluation. Most of the European countries have a national quality assurance system and a university quality audit, however 10% of LIS Schools in Europe have no external evaluation or accreditation of quality. It is important to note that one of the major problem plaguing the field of quality is the inconsistent use of the term. In Europe, there are different evaluation processes called with different names: validation, accreditation and quality assurance, but sometimes there are misunderstandings between the meanings. *Validation* refers to internal procedures of the higher education institutions, which ensure that a programme has fulfilled institutional criteria of quality. In some countries, as Italy for example, the validation is required for new programs and it requires an external approval (Government, Peer Committee, others). Validation is done only once, at the start of the program. Most of the European LIS Schools have quality assurance processes for periodic review of existing programmes of study and of their constituent modules. This process sometimes is part of an external accreditation systems but more often it is done by an internal quality audit or a national Agency, usually conforming to explicit guidelines for quality evaluation.

The quality assurance process of LIS Schools in Europe is at present driven by Government or Government founded agency (69%), combined in 35% of countries with internal Quality Audit. The quality assurance model driven by Professional Association is limited to few LIS Schools (only 7%).

Some of the Library Schools in Europe have other external assessors (21%). It is the case for example of employers representatives, or international panel for accreditation, or past students and alumni associations.

Other evaluation procedures include the Subject Review Audit, which is done only in UK, for the Benchmarking process.

Tab. 1 Accreditors or Assessors	Replies	EU LIS Schools %
No accreditors	3	10
Government or a body funded by the government	20	69
University Quality Audit	10	35
Professional association	2	7
Other stakeholders (like external assessors, employers, alumni, etc.)	6	21
Total	41	

The answer to this question is almost certainly to be found in the complex web of formal bureaucracy for quality procedures. It is important to know who has been involved in setting and approving educational standards. If the standards established by labour market lead bodies for competence-based education and training are to be the foundation of all future education programmes in Europe, this places those lead bodies at the front end of curriculum development. For example, in this case the universities receive from the Government mandatory guidelines for curriculum design. There is possibly a very critical question that needs to be asked. How has the LIS labour market been represented for which lead bodies can establish curriculum development? Participation and representation in the quality process are now key issues, and special efforts are increasingly made to ensure that the widest range of views are taken into the analysis. This covers liaison with European qualification Framework, others European standards (as ECTS, Europass, Dublin Descriptors), and the specific development of standards in a range of all occupational areas in LIS.

2. How are LIS standards set?

It is important to declare that, in the strictest sense, standards can only come from accredited standard establishing bodies, such as the Institute of Electrical and Electronics Engineers (IEEE) and the International Standards Organization (ISO). Many of the so-called “standards”, mainly specified by LIS professional associations, are actually guidelines, principles or statements of good practice rather than true standards.

All the LIS guidelines are fairly open and flexible enough to offer space for different approaches (Khoo, Majid, and Sattar Chaudry 2003). LIS guidelines cover areas as:

- The context of the programme, the institutional support, the relationship with the parent institutions;
- Mission, goals and objectives;
- Curriculum content;
- Faculty and staff;
- Students and policy and procedures;
- Administration and financial support;
- Instructional resources and facilities;
- Regular review of the programme;
- Employment and labour market.

The criteria mostly commonly used in LIS Guidelines assume that learning takes place if institutions provide certain inputs or resources (e.g., curriculum content, limited class size, full-time faculty, student workload, documented policies, equipped classrooms and libraries). IFLA ET Section has attempted to try to support the procedures by which lead bodies set about the task of developing standards. The Section has produced the *Guidelines for professional LIS programs* which define accreditation requisites (IFLA. Section Education and Training 2000). IFLA guidelines specify theory and practice and suggest having practicum, internship and fieldwork for students. The content of a core curriculum is also indicated, together with transferable skills, such as communication skills, time management skills, analytical and problem solving skills. Other LIS guidelines add more disciplines or additional skills to the core.

In Europe, the Bologna Process (Adam 2004) are now placing a growing emphasis on learning outcomes, giving institutions greater flexibility over how they achieve the outcomes. Emphasis on learning outcomes leads to the need to consider the relationship of quality assurance to the recognition of qualifications (Tammaro 2005). In practice, a relatively small number of competences have to be evidenced, utilising different methodologies. A first method of analysing

work or occupational functions begins with a top-down process of identifying the key purpose and key roles, and then progressively breaking these down into smaller units of competence - units and elements of competence. Each element of competence can be further refined into a series of identifiable, measurable and assessable performance criteria. This method is called competence referencing process. Many countries have national systems of qualifications which are comprehensive, including all levels of education and training. An other approach will review the range of settings, activities and work arrangements in which the professional functions occur, related to different work environment and qualifications level. This approach is called criteria referenced process. The standards methodology, using functional analysis and combined with various verification procedures, including a range of task analyses undertaken by those who actually do the job, has undoubtedly become more sophisticated and rigorous, to the point where the importance of the methodological concerns of reliability and validity, as well as the equal opportunities dimensions of the process, have been recognised. The outcomes have been increasingly sophisticated but detailed set of training standards in a wide range of occupational areas. So detailed that they become extremely bulky to the point of being unmanageable. It should be said that if the entire process of certification has to have compliance with guidelines, it becomes too cumbersome or costly, and it will be bypassed. A number of English-speaking countries have formally developed and published national frameworks of qualifications. National Vocational Qualifications (NVQ), introduced in the UK in 1980, are work related and represent a national standards recognised by employers through the country and used as reference criteria for qualifications¹. CILIP (CILIP 1992) in UK has started a certification program of individual competences. For this procedure, there is the need to provide evidence of an individual's fitness for professional practice. This evidence consists of a professional development report, a portfolio and an interview with the person to be certified.

Another approach to quality assurance in LIS, used only in 10% of LIS schools in Europe, is the application of industrial standards such as ISO 9000, and management systems such as TQM (Total Quality Management) and EFQM (European Foundation for Quality Management 1992). The ISO 9000 series intends to stimulate trade by providing assurance of an organisation's ability to meet specifications and perform the negotiated standards. The standards are not intended to certify quality of a product or service or whether one is better than another, but the standards relate to an organisation's quality system (Lampercht 1992). Most managers of educational institutions recognize that quality must focus on linkages among functions across entire organisations: this is the principle of Total Quality Management (Seymour 1991). TQM combines quality control, quality assurance and quality improvement and goes beyond traditional customer satisfaction by addressing the needs of internal customers (as students, parents, employers), suppliers and other stakeholders. Quality assurance models based on TQM stress self-evaluation and institutional enhancement. EFQM (European Foundation for Quality Management) is an excellence model (Konrad 1997), trying to facilitate the achievement of the best results by the institutions. Quality management systems (Herget 2003) offer for LIS University Departments the possibility to achieve and monitor excellence, by looking at financial aspects, internal processes, efforts for change and innovation, impact of communication, and alumni surveys. In trying to use industrial standards in education, it becomes inevitable that education is treated as if it were a manufacturing process and students are viewed as products or consumers. Modelling students as customers has the advantage of

¹ One Lead Body of NVQ was set up for the information occupational sector, subdivided into the areas of: Information and Library Services, Archives, Records management, Tourist information. NVQ describes work functions, work tasks and standards of competence, in five levels of achievements, each representing an increasing range and complexity of tasks and greater responsibility within the working environment. Each level refers to a job role or a range of role activities. Individuals complete a set of tasks which are assessed against criterion-referenced national standards and, if deemed to be satisfactory, a national recognised qualification is awarded.

emphasizing that to achieve quality one has to listen to students and be sure they are satisfied. Based on above discussions, (Harvey 1995) hypothesizes that the effort to implement quality management models as practised in industry across all operations of a university is flawed. An educational enterprise has to take a more holistic approach, not limiting by the processes, product or service approaches of the industrial model.

3. Who assesses the standards?

The quality assurance process most diffused in European LIS Schools is in four steps:

- periodically evaluation process;
- self-assessment;
- peer export site visit;
- follow up report.

The process usually takes place every two to five years (66%), with self assessment and site visit (55 and 52% respectively), often combined together. Differences could be evidenced for the follow up report, not often produced (only 41%) and with limited publicity (only 7% made the report public).

Most of the respondents said that guidelines are followed. Typically the guidelines are part of an accreditation handbook or policy manual 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 elucidate standards and relate to their application. In most of the case, the European LIS schools have to follow the guidelines which are given by the Government Agency and they are common for all the universities and not subject related.

Tab. 2 Quality Assurance Process in Europe

Periodicity	Replies	EU LIS Schools %
- annually	4	14
- two to five years	19	66
- over five years	0	0
- other	4	14
<i>Self assessment</i>	16	55
<i>Site visit</i>	15	52
<i>Follow up report</i>		
Publicly available	12	41
Not available	2	7

Unless lead bodies are also awarding and accrediting bodies, this falls outside their responsibility. In the framework of Bologna process, the lead body at national level will have a key role to play in establishing qualification structures and elements of competences, adapted to the European Qualification Framework. Whilst the lead body can specify the number and range of units for

assessment, and give advice on how evidence may be collected, the actual assessment should be left to specialist agencies and verified by the awarding and accrediting bodies. Also an institution of higher education might have seen itself as a self-assertiveness organisation. Increasingly, they will need to adapt to an external assessment. Staff will need to be competent in assessment and verification together with pedagogic skills. Assessment agencies will include a broad range of organisations, including Library Associations. Employers also, for example, can set themselves up as assessment centres, both for their own employees and for those of other firms within their occupational area. Specialist consultancies are already emerging for undertaking these activities. Indeed, particular regulations are prescribed as required competences for assessors and verifiers. Who assesses the assessors? Who certifies the verifiers?

One question could be done: Does quality assurance make a difference? The discussion is particularly important for two reasons:

- first, it prompts us to consider the need for more impact research and indirectly perhaps the need for more research-informed approach to quality evaluation;
- second, it is worth reflecting the case while the improvement has been the secondary feature of most external review systems.

The difficulty is to find if there is an impact on the quality of student learning. Harvey (Harvey 1995) proposes a model for the transformation of quality evaluation, now most frequently informed by accountability and control. This is the reason for the author why, consequently, quality evaluation has contributed little to any effective transformation of student learning experience. As would be expected, in a diverse higher education system where institutions have distinctive missions and goals, universities vary in their approach to defining the attributes they expect of their graduates.

4. What are the indicators?

The main finding of the survey has been a quality model, which is based on a taxonomy(ies) covering quality criteria/processes/definitions to describe, specify, and understand critical properties, characteristics, and metrics of quality in LIS. This broad model identifies four points at which indicators can be recorded:

- inputs (the resources used);
- activity/process (the teaching, learning, and management/organisational opportunities and efforts that are applied to the inputs);
- outputs (the results in the education system, which may be seen as intermediate outcomes); and
- outcomes (the impact, both direct and indirect).

This model provides a way of conceptualising the effects or results of the education system (outcomes) and the influences on those outcomes. Three types of quality assurance have emerged from various LIS guidelines and standards: 1) program orientation, 2) educational process orientation, 3) learning outcomes orientation.

Program orientation: attention is given to functions such as needs analysis, goal setting, curriculum design, staffing, resource acquisition and allocation. Most accreditation quality assurance models are based on programme orientation. Program orientation stresses accountability and it is teacher driven. Staffing quality indicators include attention to the use of effective procedures in teacher selection criteria. (Medical Library Association 1992) (Music Library Association) (Society of American Archivists 2002). Other indicators (about 21%) refer to: staff quality (as professional experience, academic background, contribution to the professional

development), research productivity, value based education, cultural meetings. Some countries consider the international activities, teaching materials, academic and service staff.

Tab. 3 Performance indicators in Europe	Replies	EU LIS Schools %
The design and content of the program	24	83
Resources in terms of funding, staff numbers and IT/Library facilities	19	66
Number of students, drop - out rates, recruitment	14	48
Other	6	21

Quality indicators balance participants and employers needs and aspirations, LIS schools purposes and resources. Quantitative and demographical data on students are also considered quality indicators by 48% of countries.

Educational process orientation: these quality indicators include the major decision areas for higher education institutions who plan and conduct education programs and university quality audits which focus on quality control. Most of the guidelines used by LIS Schools are based on industrial standards such as ISO 9000, TQM and EQM. In one approach to applying these standards, the focus is on reducing variance around set standards of the educational process. The assumption is that, if the process is well done, the success of the education is assured. An other approach is based on the assumption that when specifying quality standards, one is identifying *excellence*. Industrial standards usually stress world-class benchmarks and excellence. This approach to evaluation of quality is less used in LIS schools in Europe (only 10%). We can indicate the LIS Benchmarking project in UK, which is used (Huckle 2002) not only to define what should be done, but also how well it should be done. Quality management systems (Herget 2003) offer for LIS University Departments the possibility to achieve and monitor excellence, by looking at financial aspects, internal processes, efforts for change and innovation, impact of communication, and alumni surveys.

Learning outcomes orientation: it focuses attention on explicit and detailed statements of what students learn: the skills, the knowledge, the understanding and abilities which LIS Schools seek to develop and then test. This orientation is student centered learning. Pors (Pors 2001) has measured students' performance and perceptions as elements of quality assurance. This approach has been represented as a paradigm shift from traditional ways of measuring learning, characterised as input approaches (emphasizing teaching hours expressed in ECTS and counting resources) to output focused methodologies using learning outcomes and competences. Education has a range of direct and indirect effects for individuals and society at large that could be measured. Specification of the framework, i.e. determining the *domains* of the framework, involves deciding which types or categories of outcomes to measure, as well as which categories of influences on outcomes the indicators framework should cover.

The influences on learning outcomes are potentially vast and include many factors outside of the education system. Some of these may also be factors over which higher education institutions intervention has neither direct nor reasonable influence. The complexities of the education process must be borne in mind in applying this model:

- **T**here are multiple factors outside of the learning and teaching process that impact on outcomes (including genetic, familial, community and work-based factors).
- **S**tudent involvement is critical to the teaching and learning process (and part of that process).

The outcomes focus is less used than input measures. Students are involved in quality assurance by 69% of countries. Learning outcomes is used by 52% of countries, at different level. Other output measures have been indicated (about 14%) as: percentage of students working after graduation, approval of work done by students from library professionals, measure of relevance to the labour market, research and scholarly publication activity and strategic position of the program inside the university.

Tab. 4 Outcomes in Europe	Replies	EU LIS Schools %
Student evaluation of the learning experience	20	69
Assessment of student learning outcomes through exams and/or employers evaluations	15	52
Other	4	14

The emphasis on outcomes moves the criteria for quality from the input (what staff teach) to the outcome (what students will be able to do). The adoption of a learning outcomes approach focuses on the learner and not on the teacher. It promotes the idea of the teacher as facilitator or manager of the learning process and recognises that much learning takes place outside the classroom, without a teacher present (Adam 2004). In the Dutch Higher Education system the focus is currently on developing a competence-oriented curriculum also for information studies (Roggema-van Heusden 2004). The outcomes assessment process is not only important for quality assurance: it also enables the lifelong learner, from students to full professional status, to trace their progress through the identification and recognition of knowledge and skills acquisition and further training needs (Brine, Feather 2003). Some indicators relate to professionalism by identifying competences and knowledge mastery, and critical skills such as problem solving and the ability to apply practical knowledge. (Special Libraries Association 2004) (Association of College and Research Libraries 1992) The quality assurance model in this case is based on individual certification and stresses the transformative concept of quality assessment and proscribes ways to measure it.

Conclusion

In conclusion, we can say that in LIS schools in Europe:

- The indicators should provide a measure of the most important concepts in the framework of Bologna process;
- The indicators should show continuous progress towards quality enhancement;
- The indicators should enable crossborder comparisons to be made – over time, or with relevant standards or benchmarks.

This involves consideration of the conceptual definition (getting the concepts to be monitored correct), the operational definition (using the best measures for the concept), and the data sources (ensuring that the data is of a high quality). Quality assessment criteria and indicators could act as a thinking device to promote ongoing dialogue about quality in Europe. The resources and content design indicators are ranked higher (respectively 83% and 66% of countries) which is consistent with the fact that input measures are more diffused than others.

For LIS schools the implications are apparent - a changing culture, a changing role. The question of designing and customising education programmes to meet individual needs, to respond to the needs of local and national employers is still relevant to their activity. However, it is clear that whilst they need to demonstrate competence in teaching and assessment, teaching to be competent is no longer their prime role. The onus is on the 'clients' to learn to be competent; staff become managers of learning, providers of support and guidance, or assessors of competence. Having taken individuals

through the assessment of their prior training, there may be very little left for a training provider to deliver, apart from recording the assessment and putting the accreditation procedures into operation. Those involved in delivering teacher training programmes will almost certainly need to engage with the national qualification framework and associated assessment of competence and learning outcomes. Those involved in access to higher education programmes will also need to engage with the idea of teaching students to be competent in learning.

In terms of major gaps, the survey of quality assurance international indicators has shown:

- little attention to the quality of processes and activities, or the nature of the educational experience, including a general lack of established system-level indicators for effective teaching, learning environments, leadership and governance;
- few indicators linking inputs and activities to outputs and outcomes;
- no attention to influences on education outcomes external to the tertiary sector, except in terms of student background characteristics.

The main changes in role are to do with pedagogic skills and curriculum development.

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