Supporting the development of skills for information professionals

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Preparation for entry into the information professions has always been through a combination of academic study and practical training. Broadly speaking there is probably general agreement about the knowledge and understanding which the new entrant to the profession needs to acquire. There is less clarity regarding the skills which are required if s/he is to function effectively as an information professional.

The LTSN-ICS has tried to address this through involvement with the RAPID project. Support for the development of the skill set required by graduates for employment in the wider concept of library and information work is assured by providing for the personal development planning needs of students. The skills that they emerge with at the end of their chosen programme of study determines their employability.

The identification and definition of the key skills which are specific to information work is important in ensuring that the academic curriculum, and associated practical training programmes provide new entrants with the skills which they need to complement the knowledge and understanding which is being acquired through academic study. The LTSN-ICS, by defining the skills set and providing a mechanism for recording these is supporting academics in achieving employability for their graduates.

1. Introduction

Preparation for entry into the information professions has always been through a combination of academic study and practical training. The emphasis placed on each varies greatly, both between countries and over periods of time, but the need to have some of both is universally recognised. So far as the academic curriculum is concerned, there is probably general agreement about the broad scope of the knowledge and understanding which the new entrant to the profession needs to acquire. There is rather less clarity and consensus about the skills which are needed if s/he is to function effectively. Some skill acquisition is almost always part of the formal professional educational process; typically for example, a library and information science (LIS) student will learn how to catalogue, how to search for information and so on. There is, however, a much greater set of skills, not all of
them specific or unique to the information professions, which has to be mastered as an essential pre-condition of effective professional practice. Although there is a growing literature, as indicated by the work of Ward [19], Farmer and Campbell [8], Buttlar and Du Mont [4] and Elkin and Wilson [6], there is a need for a clear statement of this skill set, and for benchmarks against which a professional practitioner can judge both his/her own competencies and identify the need for further training and skill acquisition. This paper reports on an attempt to develop such a statement in the context of a project which will allow practitioners to chart their own professional development within a clear and objective framework.

This work has been undertaken by the Learning and Teaching Support Network for Information and Computer Sciences (LTSN-ICS) [13] which was established at the beginning of the year 2000 by the UK higher education funding bodies. It is one of 24 such centres covering a wide range of disciplines from art to zoology. Further details of this innovative UK programme and a comparison with programmes in other countries can be found in Appendix 1. The outcome of part of the key skills work of the Centre is the particular concern of this paper.

2. Defining key skills

Key skills can be understood on two levels. There are generic skills which all graduates in any discipline can be expected to possess, such as skills of communication, IT use and problem-solving. Indeed, the possession of such skills is increasingly used as part of the definition of the very concept of ‘graduateness’, and is ranked alongside the traditional demonstration of having acquired a range of subject knowledge and understanding. There are also, however, subject-specific key skills, which can be argued to be particularly important in those academic disciplines which directly relate to professional practice, whether that be medicine, law or indeed library and information work.

The current literature on skills for the LIS sector has been informative, but was not believed to be sufficiently understandable and usable by existing students and practitioners to support them in developing their skills. The Skills for new Information Professionals (SKIP) project [9] for example, based at the University of Plymouth, reviewed the technological skills gaps of library and information staff and attempted to define the nature and type of skills for information professionals. Similarly, the Special Libraries Association (SLA) carried out valuable work on the skills and competencies needed to work in special libraries in an American context [18]. Despite these contributions, however, a definition of the comprehensive set of skills that are required by the information professional of the twenty-first century is still needed.

The Information Services National Training Organisation (ISNTO) have developed detailed standards for National Vocational Qualifications (NVQ) up to Level 4 [11], which can be used to record the practical skills that are a part of library and information
work. They do not however provide sufficient detail about the theoretical aspects of the discipline as taught in departments of LIS and which employers in the sector attach some importance to.

The LTSN-ICS is in the process of trying to develop a definition of the skill set for information professionals. For this purpose, we have developed work undertaken in the Recording Academic Professional and Individual Development (RAPID) project, through which students and newly qualified professionals can examine their own personal professional development and measure their levels of competence in the subject-specific key skills as a means of identifying their skill gaps and training needs. RAPID, which had its origin in the field of building engineering and construction management [16], developed a Web-compatible recording system for students that enables them to track the level of their professional competencies in that discipline. This was done in collaboration with the professional bodies and the system has been implemented at other institutions of higher education. It has proved popular with students as it has enabled them to identify their own strengths and weaknesses and envision a path through to membership of a Professional Institution. We have sought to provide a similar system for students of LIS.

This is only possible, however, if we can define the skill set. To achieve this, our colleague Isobel Beckett has been collating data from a number of sources:

– module specifications from LIS courses in the UK
– accreditation documents of the professional bodies [15] (at that time, the Library Association and the Institute of Information Scientists, but now the Chartered Institute for Library and Information Professionals – CILIP)
– benchmark statements from the UK Quality Assurance Agency for Higher Education (QAA) [17]

The resulting draft document has been reviewed by officers of CILIP, members of the LTNS-ICS’s own Steering Group and a specially constituted focus group of academics and professional practitioners. (CILIP itself is in the process of progressing its own work on skills and competencies to support the information professionals in their continuing professional development.) This is to ensure that it will meet the needs of both the academic environment and the wider work environment where many skills will be acquired or developed. Preliminary results have also been presented at a number of professional meetings including the International Federation of Library Associations (IFLA) [3].

3. The skill set

The skill set which is emerging from this process focuses on four key areas of professional practice, which constitute the basic units within which skills are identified and defined:

– Information resources
– Information service and organisation management
– Information systems
– Policy and the broader social dimension of information work.

On the basis of these four core areas of professional practice, which are broadly reflected in the structure and content of academic curricula and in the QAA benchmarks, we have developed more detailed statements of the skills which are needed to underpin effective practice. In the Information Resources unit, for example, the sub-units are:

– Identification and analysis
– Collection and data management
– Knowledge organisation, recording and retrieval
– Evaluation

At the third and most important stage, different levels of skill are defined in each sub-unit. There are four levels:

A An understanding of why the skill is needed
B A basic level of ability in the skill
C A higher level of ability including the capacity to make judgements
D A full command of the skill with the ability to work independently and with initiative

The transition into full professionalism takes place between Levels C and D. In terms of the current UK qualification structure, it would normally be necessary to operate at, or very close to, Level D in order to qualify for chartered membership of CILIP and hence for full professional status.

We will illustrate this structure by continuing with the example of the Information Resources unit, concentrating on the Identification and Analysis sub-unit, shown in Fig. 1. The progression from basic awareness to self-reliant professional practice is clear. At Level A, the student or trainee has learnt that there is a problem: people need information which has to be retrieved from the sources where it is located. At Level B, s/he is interacting with a user, but the process is essentially driven by the enquirer. There is enough knowledge to recognise the need to obtain relevant information from the enquirer, and an understanding of the need to identify appropriate sources. Level C can only be reached when there is a significant underpinning from a specialist knowledge of search techniques and of the indexing which makes it possible to undertake specific and effective searches. Having retrieved the information, the student can match it against the enquirer’s request to assess the extent to which it answers the original query. At Level D, the information practitioner is fully engaged with the enquirer as a partner in the search process. S/he can deal with enquiries of any level of complexity, select appropriate search techniques and information resources, and assess the relevance of the information which is retrieved. S/he can then present the information appropriately and transmit it to the enquirer in a form and format
I can recognise a need for information, identify appropriate resources to fit the need and begin to use simple techniques to find both print and electronic information.

I can understand a user’s enquiry for information, match the necessary resources with the information needed and by constructing a strategy locate the required information. In doing this I recognise the need to gain relevant details from the enquirer and I understand access issues and how information from more than one source may be required.

I can answer a complex user enquiry by locating information using the appropriate search techniques with a clear knowledge of indexing and thesaurus construction. After accessing the necessary information I can analyse this and confirm that the information matches the need.

I can successfully locate and access information to satisfy a complex user query, compare information from a variety of sources identified through the use of a range of search strategies, and ensure this clearly meets the information need. I can also apply this information to a problem and within the limitations of copyright and plagiarism, organise and communicate the desired information appropriately.

Fig. 1. Information Resources Unit: Identification and Analysis sub-unit.

which meets his/her needs. At the same time, s/he is aware of the legal issues which encompass the provision of information, and operates within their parameters.

We can match this progression against the professional education and training process:

– Level A roughly equates with that of an entrant into an LIS degree programme (whether at undergraduate or postgraduate level)
– Level B is reached during the programme of study of this topic
– Level C is the minimum which would be expected of a professional who is in his/her first post
– Level D represents fully fledged professional practice following a period of post-qualification experience.
The mechanics of this progression will, of course, vary. Indeed, in some areas of practice, Level D may be the de facto level of graduation from a degree programme. In others, there will be some skills which are acquired through in-service training by library workers who neither have nor seek a professional qualification. In this example, many library workers at a sub-professional level will be able to work at Level B, although probably without the foundation of understanding the broader conceptual context of the work. Examples of variation could be multiplied, but the underlying concept appears to be sound.

A critically important element of the scheme is that the definitions are written in language which provokes reflective analysis by the practitioner him/herself, so that s/he knows the level which has been reached and can plan for further enhancement of professional competence. In the longer term, the hope is that students working towards a professional qualification will use the RAPID system to trace their own progress both through and beyond their formal education programme. It is hoped that in this way the concept of reflective practice will be imbued into students from the very outset of their involvement with the information profession. Such an attitude carried through an entire career, so that personal skills are continually analysed and gaps are identified an filled, will lead to continuous improvement in professional performance to the benefit both of the individual and of the profession as whole.

4. The significance of the RAPID project

There appears to be no other project anywhere the world that is currently engaged in work designed to identify and enhance professional skills in this way. This is not to say that there are no others engaged in the process of delivering best practice to the LIS sector, some of which are noted in Appendix 1. LTSN’s unique brief, however, makes it the ideal vehicle for developing links across the traditional divide between education and training, and between ‘theory’ and practice.

Why is this work important? First, it is timely. The very pervasiveness of information work means that it has also become very diverse with many LIS graduates pursuing their careers far beyond the boundaries of the traditional job market in libraries and information centres. Inevitably, the formal education of future information workers in the LIS departments has to take account of this diversity, and is increasingly generalised to allow students and new graduates to follow their own paths into and through the profession. The identification and definition of the key skills which are specific to information work is important in ensuring that the academic curriculum, and associated practical training programmes (such as placements or practicums), provide new entrants with the skills which they need to complement the knowledge and understanding which is being acquired through academic study. This is why the project has been designed to incorporate the views of both those who deliver education in LIS and those who employ LIS graduates.
Secondly, as has been suggested, the long-term objective is to encourage reflective practice, a hallmark of any competent and committed professional. The skill set has been devised in the context of the larger RAPID project which also encompasses generic key skills and personal development issues, since it is considered to be essential that subject-specific skills and the development of an individual’s professional practice are set in a broader context. The need for continuing professional development within the profession adds even more weight to the desirability of individuals recording their progress and thus enabling themselves to identify the gaps that might exist in their own professional skill set. Recording their skills at an early stage will prepare students for the need to record their professional development at each subsequent stage in their careers.

5. Conclusion: the further development of RAPID

The initial end-product is a set of printed proformas, which will be developed into a simple electronic package which the newly qualified professional can use to chart and record professional development and identify further training needs. But the skills are common throughout the profession, and the definitions ought to be usable outside the immediate context for which they have been created. Following a carefully monitored pilot scheme, the RAPID package will be made widely available in both printed and electronic formats. But of course it will never be complete: new developments, both social and technological, will create new imperatives for the profession and the demand for new skills.

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Appendix 1

The Learning and Teaching Support Network – Centre for Information and Computer Sciences: An overview and international comparison

The overall aim of the LTSN [13] programme is:
To provide, through a coherent and integrated network of subject specific and generic centres, high quality information, expertise, and resources on good and
innovative learning and teaching practices, and to effectively promote and transfer such practices to enhance learning and teaching activity in UK higher education.

The LT_SN is engaging with institutions by supporting them at the subject level; on the basis of HEFCE’s review of previous initiatives [10]; this is believed to be the best way to disseminate good practice.

Within the LT_SN network, Library and Information Science (LIS) is based in the Department of Information Science at Loughborough University. The Centre is responsible for promoting quality information, resources and expertise in the LIS domain. It is addressing this aim by creating networks and establishing contacts within the discipline to ensure that information disseminated to the community reaches the widest possible audience. More people are becoming involved in the work of the LT_SN-ICS and greater impact is being made in promoting good practice in learning and teaching within LIS.

The LT_SN-ICS’s website contains full details of its activities [14]. The current work includes:

– Publishing ITALICS (Innovations in Teaching and Learning in Information and Computer Sciences), a peer-reviewed electronic journal
– Managing and participating in projects looking at aspects of teaching and learning, including plagiarism, cross-searching of interfaces and key skills
– Managing a development fund which provides modest support for appropriate projects in UK HE institutions
– Running an enquiry service that links the expertise of those in LIS departments
– Running a programme of conferences, workshops and focus groups

Schemes that address the need to promote teaching and learning activity in higher education are to be found in some other countries. In Autumn 2000, for example, Sweden established the Council for the Renewal of Higher Education to support activities that were concerned with pedagogical innovation in HE [5]. This body is also charged with collecting and disseminating information on activities related to HE in Sweden and abroad. Similarly, the Australian Universities Teaching Committee was created in 2000 to promote excellence and collaboration in university teaching and learning [2]. It offers grants and awards, and provides some useful links. Neither of these bodies, however, provides a subject-based approach to learning and teaching and neither supports HE by giving a subject focus to their activities.

Although there is nothing quite like LT_SN elsewhere in the world, (either in general terms, or for LIS), there are of course many others engaged in the process of delivering best practice to the sector. The American Association of School Librarians, for example, is promoting the building of partnerships for learning to promote standards for information literacy for students [1]. This includes learning and teaching support as well as access to and delivery of programmes, but the emphasis is on work in schools, rather than on professional education, and is concerned with on information literacy rather than the teaching of LIS. The long-established ERIC (Educational Resources Information Center) [7] provides access to resources on library science
education, including discussion groups, Internet resources, useful organizations and also offer access to some articles via their Clearinghouse on Information and Technology. Despite its great utility, ERIC does not overtly promote the sharing of good practice by bringing academics together and remains only an access point for information. The Internet Library for Librarians, which is provided by a commercial company, claims to be the ‘the most popular Internet Information site for librarians since 1994’ [12]. Whether or not this claim is justified, there is certainly a wealth of resources available from this site. It is not, however, designed primarily for the LIS academic market, but for practitioners. These resources, and others on a lesser scale, provide access to important materials, but nothing has yet been attempted to provide resources to support learning and teaching for LIS academics, students and newly graduated professionals. The LTSN-ICS is attempting to do precisely this, and to make the results available to the HE community and across the traditional dividing line between education and training.