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Information literacy in LIS education: exploring the student view

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Abstract

Theoretical and practical principles of information literacy (IL) are generally embedded into the wider course structure of Library and Information Studies (LIS) Masters programmes. This paper discusses the findings of a qualitative thematic content analysis of library student exam answer texts, which provide a student view of whether it would be appropriate to designate a stand-alone module specifically for the delivery of these principles. The key concepts of IL are currently found embedded within the core programme. It is suggested that the introduction of a distinct module may more appropriately reflect stakeholder requirements, including LIS students' combined needs as producer-consumers of IL interventions in their study and practice. There is an increasing requirement for them to develop, deliver and evaluate good-practice interventions in the workplace. This work builds on existing discussions around IL as a discipline and the changing role of the librarian. The analysis is substantially informed by the participants' views. It suggests that while embedding IL in the library school curriculum can address the consumer-IL needs of the participants as students, a more explicit focus will support development of their professional-IL needs.

Keywords

information literacy; LIS curriculum development; professional frameworks; text analysis; academic libraries; higher education; UK

1. Introduction

The concept of information literacy (IL) is two-fold in Library and Information Studies (LIS) education. Firstly, students require IL as consumers, that 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 2004), or, more recently, "... a repertoire of understandings, practices, and dispositions focused on flexible engagement with the information ecosystem, underpinned by critical self-reflection" (ACRL 2014). This enables them to flourish as students and make the most of their experience during their studies. Secondly, they will also be expected to deliver relevant, good-practice, pedagogically-sound interventions when they complete their studies and return to the world of library and information professional practice. They will therefore act as IL "producers" to help others to develop their own information literacies. Since the days of bibliographic instruction and user education, research into LIS programmes (Shonrock and Mulder 1993; Albrecht and Baron 2002; Ishimura and Bartlett 2009; Gerolimos 2009; Simmons and Corral 2011) has considered the issues and practicalities of developing LIS graduates skill-sets in the curriculum, and there are many examples of courses and modules devoted to the delivery of bibliographic instruction, user education, and IL in LIS through recent history.

This paper is prompted by ongoing curriculum development in a UK LIS Master's programme. While theoretical and practical principles of IL are currently embedded into the wider course structure, a stand-alone IL module is under development. The findings of a content analysis of

exam answer texts is discussed, which help to provide a LIS student view of how IL sits within their conception of the role of the librarian and their intended study outcomes.

The analysis is discussed in the context of the literature and the Chartered Institute of Library and Information Professionals' (CILIP) Professional Knowledge and Skills Base (PKSB) framework (CILIP n.d.), which has been used very recently in their re-accreditation of the programme. It is suggested that, although the key concepts of IL may be embedded within a core LIS programme, the introduction of a stand-alone module may more appropriately reflect stakeholder requirements, including LIS students' combined needs as consumer-producers of IL interventions in their study and practice.

2. Background

There has been rapid growth in awareness of IL across the library and information profession, particularly prompted by the impact of digital resources on the use of libraries (Simmons and Corral 2010). The abilities required to develop and deliver IL interventions to enhance the information literacies of library users are considered by professional associations in the UK (CILIP n.d.), US (ALA 2009) and Australia (ALIA 2012) to be core skills of their members. The CILIP PKSB identifies 'Literacies and Learning' as a key Professional Expertise for continuing professional development (CPD) of their members, IL being one of various related 'Knowledge/Skills Areas' under this expertise alongside other literacies, support delivery and aspects of curriculum development. ALA considers IL to be a 'Core Competence of Reference and User Services', while ALIA identify IL as one of the 'Core Knowledge and Skills for Information Services and for Employability'. Globally there are numerous other examples of this type of acknowledgement of the core nature of IL in the knowledge, skills and competences of qualified library and information professionals and this is reflected in current LIS programmes worldwide (Baro 2011; Hedman 2005; Jiyane and Onyancha 2010; Mahmood 2012; Mammo 2011; Widen 2012).

The perceived academic and professional divide (Stortz 2012) reflects a need, in vocational education, to accommodate theory and practice in a balanced way to meet the demands of numerous stakeholders: the institution, various funding, policy and strategic organisations (for example, in the UK: Quality Assurance Agency and Higher Education Academy), accrediting professional associations, faculty, students, employers and (ultimately) users of relevant services. There are different factors at play here. The motivation of the student may be to develop their practical skills in order to progress in their career, while employers are seeking to hire qualified staff who will make an immediate impact on service delivery to the users. The educational institutions and their faculty staff may focus more on delivery of academic theory which may lead to significant research outputs, and institutional services (such as library, e-learning, teaching and learning and careers departments) are more likely to focus on encouraging maximum use of resources or employability issues.

It is generally considered appropriate for LIS curricula to focus on theory and practice related to core 'librarian' skills such as cataloguing and classification, collection management, reference services and management (Gorman 2004). Further to this, the 'complete librarian' (Audunson et al 2003) has attempted to refocus on professional skills relating more specifically to library practice. Recent changes, reflected by the growth in the i-Schools movement, have expanded LIS as a discipline into more theoretical research-based study of areas some may consider peripheral to LIS as a practice-based discipline. The tension between theory and practice can also be found when considering IL. While it has long been considered important that the library delivers an effective instruction programme for users, whether this be known as bibliographic instruction (Pastine and Seibert 1980; Larson and Meltzer 1987; Shonrock and Mulder 1993), user education, instruction, or IL, the diverse skills required of staff to fulfil this mission, particularly the practical skills relating to database searching, may be considered by LIS departments, employers and employees to be

more suitably delivered by the employer, leaving theory to the educational institution (Shonrock and Mulder 1993; Julien 2005; Westbrook 1999; Westbrook and Fabian 2010). CPD, for example through CILIP validation (in the UK), therefore, is an integral part of the LIS discipline. This widens the stakeholder net and leads to a highly complex educational environment for the development of LIS practitioners. The role of LIS schools in this environment is negotiated through informal and formal conversations with the stakeholders, through curriculum development mapped to institutional and professional frameworks as well as student feedback and faculty input. Although the flexibility generated through these negotiations may contribute to the multiple tensions discussed here, it also allows LIS education to continually reflect changes in thinking in the professional and the educational context, thus maintaining its currency.

Across the university sector, the trend in the delivery of consumer-IL to students in general has been towards embedment, or integration, within the curriculum. This appears to reflect the historical development of curriculum design, where skills have been integrated into the curriculum (Lamb, Shipp and Moncrief 1995) and are used to enhance engagement with content, seen most recently in the integration of technology into teaching (Hennessey et al 2005; McGarr 2009; Zaharija et al 2013). Integration does not prevent stand-alone delivery, as they have different functions. The very recent debate on teaching coding in the classroom (Peyton-Jones et al 2013; Shueh 2014) illustrates this dichotomy. While technology has been used widely in schools as a teaching tool, stand-alone ICT classes have been failing to encourage widespread interest from pupils in taking computer science. This was shown to link to lack of uptake at higher levels of education and arguably impacted on British economic performance in the computing industries (NESTA 2011; Royal Society 2012). Strategic change has now led to coding being included in the curriculum (despite tremendous resourcing problems caused by the failure the change has been designed to address). Integrated delivery of the skills and attributes required to benefit from the use of technology in the classroom is still being delivered alongside stand-alone delivery of higher level knowledge and understanding around the workings of those technologies.

This dual delivery reflects the discussion within IL. If we consider the purpose of delivering IL education to LIS students, there is a dual-faceted nature of IL in this context. Developing student skills with a view to supporting their abilities in engaging with information reflects students' needs as 'consumers' of IL. This may be for their coursework or for lifelong learning. Many LIS students, however, are also required to be 'producers' of IL interventions after they graduate (Avery and Ketchner 1996; Gold and Grotti 2013) and 'teaching' is considered to be becoming part of the identity of the librarian (Hedman 2005; Walter 2008). They therefore need "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" (Kajberg, and Lorrington 2005, p. 68). The higher level knowledge, skills and attributes required for the successful development and delivery of such interventions means they are likely to be involved in teaching, marketing and promotion, software development, networking and liaison, budgeting and communication (Inskip 2013) and will require skills developed either in LIS school (Albrecht and Baron 2002; Cooke and Hensley 2013; Hensley 2015) or through CPD. Many of these may be integrated within wider core programmes, facilitating the development of 'blended' or 'hybrid' librarians (Corrall 2010). It is possible that linking knowledge, understanding, skills and competences explicitly to IL through a stand-alone module would enable the participants who wish to gain a deeper knowledge of IL as a discipline (Badke 2008; Johnston and Webber 2003; Johnston and Webber 2006; Webber 2013). This could enable them to pursue more specialist practice options in the hope of enhancing their employability, or develop their knowledge for its own sake (Webber and Johnston 2014). This is not to say that the current embedded IL delivery would be replaced by a stand-alone module. If we recognise that curriculum has many levels (Wang 2014) then it is essential to maintain the delivery of consumer-IL skills through integration into the wider programme curriculum, as this will facilitate constructive alignment (Biggs 1999). An example here would be programming a session on source evaluation around the announcement of assessed literature review. This approach is much more likely to

contribute to student learning and has been well documented in the LIS literature on embedding IL (Badke 2008; Derakhshan and Singh 2011; Wang 2014).

Embedding recognises the value of delivering IL as part of the regular teaching and learning programme rather than relying on a one-shot induction session and, as this approach gains credibility with academics, it is likely to increase the demand for librarians' teaching time (Simmons and Corrall 2011). If there is continued support for embedding IL in the curriculum, then this will impact on demand for library interventions at all stages of education, particularly subject librarians (Bewick and Corrall 2010; Houtman 2010; Simmons and Corrall 2011) who are thus more likely to be required to deliver effective and pedagogically sound interventions at a wide range of levels, rather than as one-shot induction sessions.

Despite this developing widespread recognition, not all LIS programmes feature explicit coverage of IL in their courses. In the UK, for example, out of the 17 CILIP accredited programmes (CILIP 2014), at the time of writing two feature specific IL modules: University of Sheffield (University of Sheffield 2014) and University of the West of England (UWE 2014), although it is probable that all feature integration at some level, to qualify for accreditation.

3. Context

The department in this study offers two CILIP-accredited courses (known internally as programmes). This paper concerns the MA in Library and Information Studies (MA LIS) (UCL 2014). The course comprises six core (compulsory) modules and eleven optional modules, from which two may be taken. IL concepts and practices are currently embedded or integrated into the programme curriculum, and theoretical and practical issues are delivered predominantly within three core modules ('Collection management and preservation', 'Information sources and retrieval', 'Introduction to management') and one optional ('Services to children and young people'). Other modules ('Cataloguing and classification', 'Principles of computing and information technology') also include elements of IL theory and practice where relevant to their discipline. As such, this could be considered to be partly an integrated interdisciplinary curriculum (Ackerman and Perkins 1989). Each module focuses on a specific area of study or discipline, while incorporating, drawing from, and building on content and skills studied in other modules. The content, or producer-IL components of these modules, albeit at an introductory level, contribute towards developing LIS students' knowledge and understanding of good practice IL interventions and include references to high level competences such as key theoretical models in information behaviour, current research, pedagogy, marketing and communication, and presentation skills.

In terms of practical consumer-IL skills, subject librarians with different areas of expertise are involved in this delivery in collaboration with faculty, focusing primarily on developing the search and evaluation skills of the LIS students themselves. This delivery is supported by various elements of library services, which are delivered face-to-face and as online resources which are also available to the wider student community. The lab-based interactive delivery element of the 'Information sources and retrieval' module, for example, focuses predominantly on search strategies and library-subscribed databases, while lectures in this module focus on user information needs, source evaluation and developing awareness of a user-centred approach to reference services. In addition to curriculum-led delivery there are numerous examples of student-selected coursework case studies and dissertations looking at specific issues of IL, which allow for self-directed study for those with a particular interest in the area. This embedded approach to delivery offers a mixture of consumer- and producer-IL. The approach is relatively flexible and allows the reflection of rapid changes in the profession and in education, particularly since the advent of digital technology. In the interests of continuing curriculum development, it was considered appropriate to review this delivery and investigate the possibilities of developing a stand-alone IL module.

4. Methodology

In order to inform an evidence-based approach to curriculum development it was decided to gather the views of current students on IL as a separate module. This was done towards the completion of their studies. By the time the data was gathered the taught modules had all been completed, so the cohort had knowledge of the content and delivery of all of the core modules and a range of optional modules. Their views, as participants, would therefore be well-informed. Informally, the programme team had noted that there was interest from the current and incoming students in the detail of IL theory and practice that was potentially wider than the current embedded delivery. The purpose of the research presented here was to explore the factors in student participant views of whether IL should be taught as a stand-alone module as part of the LIS programme.

In the 'Professional Awareness' exam in the academic year 2013/14 one question asked students "*Should information literacy be a core module in the MA LIS at UCL?*". 15 students out of 31 taking the exam chose to answer this question. They were not informed before taking the exam that their texts may be used for research purposes. After the exams had been marked all 31 students were contacted asking for their informed consent in allowing their answers to this question, if they had answered it, to be used for this research. The students were assured that their answers would not be reviewed for the research in terms of their quality, but rather in terms of their content: the mark which had been given for the answer was not considered a factor in the research. The researcher was seeking to analyse the content of the texts in terms of vocabulary and meaning. Students were assured that the quality of the answers would not be discussed in any research outputs. In communication with the participants, the researcher stated: "*I will be writing about the content of your arguments, and not commenting on the quality of your answers.*"

The use of secondary analysis of data which may not be covered by initial consent is an important ethical debate in the social sciences. Following ethical guidelines, the use of qualitative data will be covered by informed consent for the research for which the data was collected. In some instances, the original researcher – or others not involved at the outset – may wish to revisit this data in a new context, raising the issue of whether it is covered by the originally granted consent (Grinyer 2009). In this research, however, the texts under analysis for this research were not originally intended as research data but were written for an exam. The expectation of the participants was that these would be read critically by a first and second marker, and possibly be reviewed by an external examiner. The purpose of producing the texts was to answer the exam question satisfactorily in order to show the participant had knowledge and understanding of the issues in order to gain marks and meet the learning outcomes of this form of assessment. They would not anticipate that their texts may be used for research purposes. The decision to use the texts as research data was taken after the exam had been set.

A clear strategy to gather anonymised informed consent was developed. Following standard UCL research ethics procedure, a written research protocol was submitted to the Departmental Research Committee. It was agreed by the Chair of the Committee that the approach was exempt from the requirements for full submission to the UCL Research Ethics Committee. After a discussion with the researcher to clarify the process, approval to proceed was subsequently granted by the Departmental Chair.

Efforts were made by the researcher to follow a transparent approach in the securing of participants consent for the secondary use of the data in the work. An opt-out approach was taken to facilitate complete anonymity of the participants. Those wishing to withdraw their text from the sample were asked to contact the programme administrator, who then supplied anonymised candidate numbers to the researcher, a lecturer on the programme with a research interest in IL. An anonymised discussion, facilitated by the programme administrator, was held between a representative of the students and the researcher, which was cascaded by the representative to the other students. To anonymise this discussion it was channelled through the programme

administrator, who removed student names from the comments and queries before passing them onto the researcher, and who subsequently sent the researcher's responses to the students. Individual students also contacted the researcher using this anonymisation process. Comments related to the ethics of the approach and the potential limitations of these scripts as research data, noted below. Two students subsequently opted out of the analysis and their scripts were removed from the purposive sample, leaving 13 texts for analysis.

The ethical use of coursework generated by learners for published research purposes is a complex issue. Shi (2006) discusses the problems around informed consent, anonymisation and opting-out in her work on integrating technology into a teacher-training programme. The tensions between, on one side, being a learner and a participant, and those between being a teacher and a researcher on the other are difficult to accommodate. Learners may be reluctant to allow their coursework to be used as research data. Researchers may have difficulty in shifting role from that of teacher. In this research, the opt-out decision was an issue. Some students noted that they would have preferred to be given the opportunity to opt-in. While the anonymous discussion described above was designed to remove any possibility of prejudice and minimise discomfort for the participants it is possible that the power relationship between the teacher and the learners impacted on some students' decisions to not opt out. This challenge is noted by Shi (2006), notably because it differs from the researcher/participant relationship, which is more likely to be mutually supportive. The exam scripts had already been marked, and had always been anonymised, as this was part of the exam process. They were now being treated as research data rather than coursework. It was a very important element of the research strategy to acknowledge this shift and address the complexity of views of the creators and the interpreter of the texts. Communication between the participant/learners and the researcher/teacher was central to this renegotiation of purpose.

This research takes an interpretivist/constructivist approach (Patton 2015) to explore, at the semantic level, how IL sits within participants' views of the role of the librarian and their intended study outcomes. This approach considers meaning to be socially constructed. The views of this community of practice are informed by the participants' professional and educational context and their interpretation of how they sit within that context. The aim of the analysis is to explore themes at an explicit level rather than looking beyond what is in their texts (Braun and Clarke 2006). The analysis is more than descriptive: organising the data into themes recognizes the existence of patterns within the data and subsequent exploration and interpretation of these patterns provides insight into the research question (Patton 2015): "what is the student view of the importance of information literacy in LIS education?" Discussing these themes as "repeated patterns of meaning" (Braun and Clarke 2006, p. 86) in the context of the literature provides insight into the ways of thinking of this community, which will contribute to the discussion around LIS curriculum development.

The researcher had previously marked many of the scripts for assessment purposes. The scripts were read closely, in order to reframe them in the researcher's mind as qualitative research data rather than as texts to be assessed in terms of meeting learning outcomes. The scripts were then re-read and manually coded, using themes which arose from reading and reflection and which linked the texts to the research question. This grounded approach allowed the researcher to iteratively identify themes in the text, rather than imposing a framework (Hayes 1997) while not committing the research to the development of theory, which would be the objective of a grounded theory approach (Braun and Clarke 2006). Coding was applied at the sentence and phrase level. As a new theme arose it was allocated an alphabetical code. The photocopied pages of the handwritten scripts were given page numbers (1 – 68). An index was generated (Table 1), which identified coding letter, theme name, and page numbers where the theme arose. This index allowed the theme texts to be easily accessed for checking consistency of coding and making comparisons. This manual, rather than automated, approach was chosen because the texts were handwritten. Automation, using software to facilitate the coding and analysis of the data, would

have required transcription of the texts. This was considered to be unnecessary with a sample of this size.

The themes were then explored in detail, through repeated reading and reflection on the content of the texts, in order to identify patterns in the data. While the data was purposive and cannot be considered to be representative of a wider sample, and is therefore not generalisable across the population of LIS students, the rich and detailed content allowed the identification of ways of thinking about key issues around how the participants viewed the level of importance of IL to their studies and to their professional development.

A limitation of the study is that these scripts were not originally intended by their authors as research data. In the anonymised correspondence the students who answered the question pointed out that they were not aware that their answers would be used for this purpose, and are likely to have written answers designed to indicate that they had met the learning outcomes for the course rather than give their views on whether or not IL should be a core module on the programme. Their answers may have been different if they had been asked to supply feedback on the question away from the pressure of the exam environment. This does not reduce the legitimacy of the texts as research data. Their texts are discourses produced within an educational framework, the exam, and were considered likely to include thoughtful answers to the question which would provide some insight into student views of this issue at a professional level. The small sample does not include the views of students who may have been interested in contributing their thoughts but chose not to answer the question or ran out of time, which limits any generalisability of the findings.

5. Findings

The themes listed in Table 1 were subsequently divided into four groups according to their content. These groups, (Librarian, Users, Curriculum, and Theory) were then reviewed to determine their consistency of content. A small number of texts were re-coded in the light of this review, as they were duplicated by other codes (L, S, V, X). The grouped themes are listed in Table 1, ranked in descending order of frequency.

It is clear that texts themed under the Librarian headings were most prevalent (96 coding instances). There were 66 instances of coding under the User heading, 31 instances related to Curriculum, and 29 related to Theory. Participants have been allocated numerical codes (001 – 013) for the purpose of anonymisation. Themes of direct quotes are identified by letter (A-X).

Table 1: Themes derived from texts

Group	Theme	Code	Quantity
Librarian	Librarian role	D	31
Librarian	Librarian IL skills	E	20
Librarian	Librarian teaching skills	F	19
Librarian	Employability and CPD	R	14
Librarian	Other librarian skills	O	8
Librarian	Learning on the job	Q	4
Librarian	IL as added value	W	2

User	Lifelong learning / society	A	19
User	Information overload / proliferation of digital info	J	18
User	User information needs	I	10
User	User IL skills	K	9
User	Study skills / research skills	B	4
User	Generation Y	C	3
User	Workplace IL	T	3
Curriculum	Curriculum development	M	12
Curriculum	Embedded in the curriculum	H	10
Curriculum	Relevance to LIS curriculum	P	5
Curriculum	Marketing the course	U	4
Theory	IL definition	N	17
Theory	IL models	G	12
n/a	Recoded, hence unused	L	-
n/a	Recoded, hence unused	S	-
n/a	Recoded, hence unused	V	-
n/a	Recoded, hence unused	X	-

5.1 Librarian

This heading contained numerous themes: Librarian role, Librarian IL skills, Librarian teaching skills, Employability, Other librarian skills, Learning on the job and CPD, and IL as added value. There were frequent examples of these themes appearing throughout the texts, indicating this was a popular focus of the participants' answers to the exam question.

It is strongly suggested from a review of the texts coded with this theme that *"Librarians are ideally placed to deliver an information literacy programme"* (D, 001) and, owing to the widening of librarian roles, are now *"curators of information"* (D, 001), *"a guide to the multiverse of information"* (D, 001) or *"changed from that of a gatekeeper of information to that of a guide who helps the user"* (D, 003). This is echoed here as the *"change in the role of information professional from service provider and information custodian to educator"* (D, 006). Additionally there appears to be a strong view in the texts of librarian as *"educator and teachers, while libraries are becoming more and more educational centres"* (D, 004) – the role of librarian as teacher, guide, advisor, trainer, enabler and helper, *"assist[ing] users in accessing this information"* (D, 006) arises frequently.

In terms of Librarian IL skills, the texts suggest there is a central and fundamental importance to the library and information professional of the possession of highly developed consumer-IL skills in the course of their duties: *"it is vital"* (E, 006). It is almost considered by some as given that these are held by the student and the professional: *"they have the skills necessary"* (E, 001), *"students in this field should already have these key skills"* (E, 002) although they may also *"need to keep on top of changes"* (E, 002). They may also place too much emphasis on the use of tools rather than higher level competences such as critical analysis and *"staff need to have a comprehensive range of skills"* (E, 010). Interestingly, although *"it would be a poor student who came out without knowing"*

great sources for finding information and with no skills for evaluating it" (E, 009), there is an opposing viewpoint which raises the *"lack of information literacy skills provided for at library schools"* (E, 008), which led to this participant discussing an example of their workplace encouraging library staff to take teaching qualifications. One student sums up these differences clearly as *"what to provide, the best way to provide it, and be able to demonstrate to the user how to turn that information into usable knowledge"* (E, 011).

This said, they can be explicit: *"Librarians are not teachers, and they are given little input or instruction on how to become effective teachers during their professional education"* (F, 001) and rather than learning about IL per se, *"time would be better spent teaching students about pedagogy"* (F, 002). Another tension arises here. That of the perceived centrality of importance of IL delivery by library and information professionals (*"librarians are involved on a day-to-day basis in teaching"* (F, 004), *"Pedagogical training will become more and more relevant"* (F, 007), which is in direct conflict with their view of professional reality: *"the fact that many librarians are expected to teach – without having any formal qualifications to do so"* (F, 001). It is also acknowledged that there are wider issues at stake here: staff are required not only to engage in user education but also *"to participate in in-house training"* (F, 006), where an understanding of learning and teaching would *"allow us to improve the delivery of training to our peers"* (F, 012). Teaching sessions are also assessed as part of the job recruitment process, and *"teaching experience is increasingly being listed on job descriptions for professional posts"* (F, 010). The combination of LIS students' consumer-IL knowledge and a producer-IL understanding will ultimately mean *"they will in fact be the best person to teach IL"* (F, 002). It is also recognised that a teaching qualification in addition to a LIS qualification would be appropriate, *"librarians would still benefit from a PGCLT in addition to the IL module"* (F, 003), although it may be *"unrealistic to expect all LIS students"* (F, 003) to complete an additional teaching course.

The requirement by employers of librarians to perform teaching roles in their professional practice was of particular interest to the participants. Naturally, as the exam was taken towards the end of the course, with students starting to seek employment to commence after their studies, participants were aware of job requirements in their chosen field. They felt that *"employers regularly want to see that prospective employees have this knowledge and related skill set"* (R, 002) and that obtaining these as part of their qualification *"would improve their standing in the job market"* (R, 002). Qualifiers such as *"vital"* (R, 002), *"valuable"* (R, 005), *"highly prized"* (R, 008), *"indispensable"* (R, 008), *"more dominant"* (R, 012) indicate the participants' view of the level of importance of IL skills to potential employers. The value of the LIS qualification to enhanced employability is supported by the view that *"if this is something employers are looking for, then LIS courses should provide it"* (R, 012). This obligation is even described as a *"moral and cultural obligation ... to further the profession, [and] protect the profession"* (R, 008). In the current *"employers market and the expectations employers have of new professionals"* (R, 012) this suggests that it is the role of the LIS school to *"prepare its students for the workplace"* (R, 005).

It was suggested that IL skills can also be related to additional core skills, particularly systems librarianship, design of usable systems, and discovery layers. However, as *"cataloguing and classification is one of the selling points of the course"* (O, 006) there was some concern about the balance in delivery, which also needed to reflect other 'new' skills such as marketing and computing.

There was some discussion about the linking of the delivery of IL to the workplace context through *"learning on the job, where it can be tailored to apply to the specific user group and resources in question"* (Q, 005). The specificity of the workplace was recognised as requiring employees with *"good, transferable general skills ... as specialist skills could be learnt on the job"* (Q, 012).

5.2 Users

Themes identified in the text relating to Users were: Lifelong learning/society, Information overload/proliferation of digital information sources and resources, User information needs, User IL skills, Study skills/research skills, Generation Y, and Workplace IL. It was widely argued that owing to the proliferation of digital information sources and resources, and to prevent information overload, users require assistance in meeting their information needs through interventions delivered by library and information professionals: *“Given the information overload in our society, everyone needs the skills to plot a course through reams of available information, to assess its accuracy, and establish whether it meets their information need.”* (A, 001), *“Libraries play a crucial role in trying to maintain a well-informed society”* (A, 004) ... *“to prepare their students for life”* (A, 009). It was also suggested that this assistance would benefit users at all levels, with emphasis on the role of public libraries, as *“Councils rely on local libraries to provide access to local information”* (A, 011) *“...supporting and encouraging active learning”* (A, 011).

In terms of information overload, the *“exponential increase in sources”* (J, 010) of *“varying qualities”* (J, 009) and *“varying levels of reliability and authority”* (J, 002) combined with the *“complex array of systems”* (J, 008) mean that *“navigating it effectively has become more crucial”* (J, 005). Recognizing there is *“a wide range of users with very different information needs”* (I, 010) means that *“knowing your user group and how they learn, process and access information”* (I, 011) is important: *“a librarian must know his or her user”* (I, 011). There is a worry that *“life skills, such as information literacy, fall by the wayside”* (K, 009) in schools, where teaching to the exam does not allow exploring the information landscape, *“opening yourself to ignorance and injustice”* (K, 009). These are *“vital research skills”* (B, 001) impacted on by *“greater use of Open Access”* (B, 006). Although *“pupils ... will often be more capable with the internet than their parents”* (C, 009) they may be *“technologically literate but not information literate”* (C, 005), believing that *“everything is available on Google”* (C, 001). It is recognised that IL issues are also relevant to the workplace as IL *“training in the workplace can affect productivity and success”* (T, 005), and *“a core element of the offer ... remains information literacy and training the bankers on using the databases that they need to interrogate themselves”* (T, 008).

5.3 Curriculum

Themes relating to the Curriculum were: Curriculum development, Embedded in the curriculum, Relevance to LIS curriculum, and Marketing the course. There were numerous discussions around the embedding of IL within existing modules in the programme. It *“is a subject taught and included in the MA LIS”* (M, 004), and *“is something one cannot avoid picking up through the modules”* (H, 009) supporting the viability of the embedded approach. Although it could *“become a more prominent topic”* (M, 006) or *“expanded”* (M, 007) as it otherwise *“risks being marginalised when it should be at the forefront”* (H, 001) and embedding may mean that *“it is not currently addressed with the level of importance that such a key skill deserves”* (H, 001). Further, *“it might be more sensible to introduce the module as an optional module”* (M, 006) while retaining *“key elements (such as finding, evaluating and managing information resources”* (M, 010) in other core modules because IL is *“a core skill”* (H, 012). Teaching theory of IL within the LIS curriculum is considered relevant because *“the best environment to learn about this theoretical side of IL is on a Masters course”* (P, 002), while the *“nuts and bolts”* (P, 002) could be acquired in the workplace.

Some discussion was also to be had around the practicality and feasibility of introducing a new module to the course and the implications this would have on the programme: *“the IL component would have to focus more on what IL is rather than how to teach IL”* (M, 003); *“logistical issues ... such as staff expertise”* (M, 006) and how this would sit with the wider curriculum as it *“might cause issues with course balance”* (M, 003); as a new core module would mean losing existing provision and whether or not this *“may also attract potential students to the course”* (U, 010). Conversely, some students may not wish to teach and could be *“put off”* (U, 010) as *“it may not always be an obvious core module to have”* (U, 012).

5.4 Theory

Two codes were allocated under this heading: IL definitions and IL models. There was widespread mention of the SCONUL Seven Pillars of Information Literacy (SCONUL 2011): *“knowing how to find relevant information, how to use it effectively, and how to reference it”* (N, 001); the CILIP PKSP (CILIP n.d.): *“Teaching users how to find, evaluate and use information effectively and ethically has always been a core tenant of the profession”* (N, 005); and the UNESCO Alexandria Proclamation (IFLA 2005): *“...organisations like UNESCO highlight its importance”* (G, 002), noting that UNESCO *“designated IL as a human right”* (G, 008), and definitions of IL were primarily drawn from these sources. These had frequently been discussed at varying levels of detail in various classes, and the general awareness of these approaches amongst participants helps to indicate that there is some value in the current embedded nature of IL within the programme: *“IL is more than finding resources, it is how to critically access the information around you”* (N, 002) as

it's now essential for future librarians and information professionals to expand the knowledge of this subject and to get to know strategies and schemes such as the SCONUL 7 Pillars of information literacy more in depth and trying to apply them in their workplace (G, 004).

The dual-nature of IL was also recognised here: *“it [IL] can encompass the skills to teach and pass on these literacies to other users – in part some pedagogical practice”* (N, 012).

6. Discussion

The overview above suggests there is already an awareness of professional issues, user needs and behaviour, curriculum development and theoretical principles amongst the participants, supporting the value of the current embedded delivery of IL within the existing programme. The prevalence of texts relating to the various Librarian themes was unsurprising, as the examined module's focus was on professional awareness.

The development in the role of the librarian from gatekeeper to enabler, has been well-documented (Albrecht and Baron 2002), notably for subject librarians. This view of librarianship as a user-centred service area, ratified by one participant thus, *“your primary purpose is to serve your users”* (D, 011), indicates strongly that the role of the librarian, as seen by these participants, is to make support available to users in their engagement with resources. This is an alternative view to that of *“managing and providing access to information”* (D, 011), held by the same participant, indicating there are two almost opposing viewpoints of librarianship which may be held by this community of interest – the gatekeeper-enabler viewpoints. This example indicates that this shift may not have completely taken place and supports the work of Simmons and Corral (2011) and Oyelude and Bamigbola (2012) who suggest libraries may now be viewed increasingly as gateways as well as gatekeepers.

Much of this discussion, however, indicates a support for the librarian-as-enabler view. The participants here suggest that the role of the librarian across all types of service is changing to emphasise the role of enablement, a primary aim of IL and lifelong learning (IFLA 2005). However, although LIS students consider themselves, as professional library and information professionals, to have a high level of consumer-IL, they do not feel so confident in 'producing' it. The emergence of the twofold aspects of IL in LIS is clearly supported by the scripts, where pedagogy is discussed at length by many of the participants. It is clear that this is something they feel is lacking in their programme, although they do not present this as a direct challenge to the institution, possibly because they did not want to prejudice their case with their exam marks by taking a negative view. In a different forum, such as a focus group or research interview, their feelings may be more clearly expressed.

The importance of developing the teaching skills of librarians, which links to the arguments around enablement, above, are widely supported in the literature (Albrecht and Barron 2002; Bewick and Corral 2010; Shonrock and Mulder 1993; Simmons and Corral 2011; Sproles et al 2008) and would contribute significantly to development, delivery and evaluation of good practice interventions. It is also likely that librarians qualified as teachers will hold more sway in negotiations with faculty for teaching time to facilitate embedding IL in the wider curriculum. Although the practicality of delivering a teaching qualification within a LIS programme is limited by the time and resources available to the institution and the students, incorporating some element of pedagogic theory into a stand-alone IL module is clearly a high priority here. This would help to enable graduates to deliver good practice interventions framed within theoretical principles, which could be enhanced by CPD in the form of teacher training provided by the workplace. CPD is an important practice encouraged by the professional associations, reflecting the view that LIS schools can deliver 'academic' knowledge which may be supported by 'practitioner' knowledge in a practice environment.

The findings relating to embedding IL in the curriculum are evidenced by the general awareness of the key IL issues. They reinforce the idea that higher level competences can be integrated successfully into an LIS programme, while, for example, detailed database and other information resource skills can be developed by on-the-job training. However if it is the case that IL is considered as becoming more explicitly demanded by employers, then this should be reflected by more explicit delivery in the curriculum through the recognition that IL can be considered a discipline in its own right (Johnston and Webber 2003; Johnston and Webber 2006; Webber 2013).

7. Conclusion

The views of the participants of this research indicate that while they consider themselves to have high levels of consumer-IL, they strongly feel that the programme would benefit from a clearer focus on the offer of producer-IL. In their view, this would enable them to secure employment more easily, and, subsequently, to more confidently deliver IL to their users once they are engaged in professional practice. As the role of the librarian moves from gatekeeper to enabler, the delivery of IL by library and information professionals becomes more important, and it is increasingly seen to be a duty of LIS to prepare graduates for this shift. Although on-the-job training and self-directed CPD can support this increased need, LIS has an important contribution to make. It appears that the current delivery is satisfactory, and recognition by the participants of their own consumer-IL skills, awareness of the importance of user information needs and behaviour, knowledge of IL theoretical principles, and of curriculum development support this view. However the widespread agreement, amongst these participants, of IL as being vital, valuable and highly-prized suggest that making this delivery more explicit would reflect their perceptions of the importance of IL in the current job market and contribute to the currency of the course. In asking the students to identify whether a module on the topic should be core or optional we were somewhat disingenuous, since new modules are always introduced as options. However it seems clear from this analysis that there is a demand for explicit delivery of IL from students and, in their view, from employers as well as the wider research and professional community. At the time of writing, an optional module is currently in development, informed partly by this research, which will be added to the curriculum in the Autumn of 2015. It is hoped that this will make a contribution to the development of LIS graduates and regular evaluations of the new module will be disseminated to the community.

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