



## Developing Inclusive Models of Reference and Instruction to Create Information Literate Communities

**Sheila Corrall**  
The Information School  
University of Sheffield  
Sheffield, UK

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### Abstract:

*Reference service and information literacy are both central to the professional practice of librarianship. The role of instruction in reference work is widely recognised but not always properly acknowledged. Technological developments have transformed access to information resources and raised awareness of information literacy. Key themes in reference and instruction include tiered services, online delivery, virtual environments, collaborative relationships and strategic integration. Paraprofessionals and others are increasingly deployed in informational and instructional services. Information literacy has emerged as a specialist field requiring pedagogical knowledge and skills. Strategies for information literacy need to become more interactive and elevated to the network level.*

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### Introduction

Changes in the environment have enabled library reference services and information literacy (IL) programmes to develop and diversify in a dynamic networked world. We can identify general trends, but there is no standard pattern of service configuration, even within particular library sectors or sub-sectors, although we can detect shared aspirations across the profession, including an accessible seamless service based on collaborative inter-professional team working. As a profession we need to make sense of this complexity by articulating next-generation models and definitions of services, skills and staffing, which will in turn inform the education, training and development of next-generation practitioners.

The purposes and interrelationships of library reference work and IL education are central to this debate. Many practitioners see reference service as the definitive role of a professional librarian and many librarians see IL as the superordinate goal of the library profession. The question whether reference service should include or focus on instruction in addition to or in preference to information is a central theme of the professional literature, which reveals differing perceptions and variant practices. Some commentators regard reference work and IL as an integrated continuum of information and learning support, but others apparently view them as distinct areas of activity that are only loosely connected.

The joint programme of the IFLA Reference and Information Services and Information Literacy Sections offers an opportunity to review the relationship of reference services delivery to IL development from a strategic perspective in an international context. This paper reviews trends in reference service delivery and IL development, then identifies strategic issues and policy questions for library service managers, concluding with suggestions for moving forward. It argues for a holistic conception of library services that recognises the important role of frontline point-of-need support in developing IL and advocates an interactive style of planning to align strategies horizontally and vertically. Written from the perspective of an educator and researcher in the field, it is also informed by experience as a practitioner and manager in public, special, national and university libraries.

## **Definition and scope**

### ***Reference services***

Descriptions of reference work often quote Rothstein's (1961: 12) definition as 'the personal assistance given by the librarian to individual readers in pursuit of information', but generally trace modern conceptions of reference and information services back to Green's (1876) paper on 'Personal relations between librarians and readers', which scoped the field in a similar way to models of reference found in contemporary textbooks. American practitioners typically categorise reference work under three headings as informational, instructional and advisory/guidance services, though with variations in the specific elements included under each heading (Bunge and Bopp, 2001; Cassell and Hiremath, 2009; Rothstein, 1961). Rothstein (1961: 13) refers to these as 'the three primary colors in the reference work picture'. However, although the term 'reference work' is defined similarly in the UK by *Harrod's Librarian's Glossary* (Prytherch, 2005), the range of services usually considered part of this area of librarianship is generally more narrowly conceived in the UK. Table 1 compares the different interpretations found in three US and UK textbooks.

Bopp & Smith (2001) [US]	Cassell & Hiremath (2009) [US, co-published in UK]	Grogan (1991) [UK]
<b>Information</b>	<b>Answering Reference Questions</b>	<b>Reference Questions</b>
Ready reference questions Bibliographic verification Interlibrary loan and document delivery Information and referral services Research questions Fee-based services and information brokering	Ready reference questions Research questions Bibliographic verification	Administrative and directional enquiries Author/title enquiries Fact-finding enquiries Material-finding enquiries Research enquiries
<b>Guidance</b>	<b>Reader's Advisory Service</b>	
Readers' advisory services Bibliotherapy Term paper counselling Selective dissemination of information		
<b>Instruction</b>	<b>Information Literacy</b>	
One-to-one instruction Group instruction Technology-enhanced instruction	One-on-one instruction In a classroom setting Online tutorials	

Table 1. Scope of Reference Services in US and UK

Table 1 shows that in the US, reference and information services are typically seen as including IL instruction, both when provided one-to-one at a reference desk (or equivalent) and when delivered to a group/in a classroom (or via technology). There is no recent UK textbook for direct comparison, but Grogan's (1991) *Practical Reference Work* illustrates the restricted interpretation common in the UK; his introduction explicitly excludes several areas of work included by American texts, notably user education/instruction, readers' advisory service and other forms of guidance, community information (information and referral) service and interlibrary loans. Grogan (1991) also argues not only that the techniques and skills used in answering reference questions are essentially the same in different types of libraries

(academic, special or public), but that they have parallels in the work done by both freelance librarians/information brokers and organisation-based search intermediaries, intelligence officers and similar roles found in planning units, research groups, clinical teams, etc.

Jennerich and Jennerich's (1997) modern classic on the reference interview defines reference work by identifying seven different types of interview occurring with users: teaching, directional, information, bibliographic instruction, technical services, circulation and interlibrary loan interviews. Interestingly, the 'teaching interview' is discussed first and the term 'interview' here includes use of library resources by librarian and user together; the 'bibliographic instruction interview' is typically with a classroom teacher to identify instructional needs of students. Although Grogan (1991) excludes instruction/IL from his definition of reference and states categorically that the primary duty of the reference librarian is to answer questions, he acknowledges the divergence of professional opinion on this issue, noting that advocates for the opposite view – that the prime duty is not to answer the question, but to instruct or guide the enquirer on how to find the answer – exist in the UK, as well as in the US. His discussion of 'Reference policy and reference philosophy' reveals strong opinions in the literature on both sides of the argument, including academic librarians opposed to an instructional focus and public librarians agreeing that teaching the correct use of library tools is not only desirable, but a professional obligation.

### ***Information literacy***

IL represents a longstanding concern of library and information professionals worldwide, although the term is a relatively recent entrant to our professional vocabulary, with its first usage generally credited to Zurkowski in 1974 (Grassian and Kaplowitz, 2001). Contemporary IL programmes have antecedents in activities variously described as library orientation, user education, bibliographic instruction and information skills teaching. User education was described by Davinson in 1980 as 'one of the biggest growth industries in the library field' (Grogan, 1991: 16), but the IL movement gained further momentum from the 1990s onwards, as developments in information technology (IT) led to massive changes in the quantity, variety and quality of information available for people to access online, especially via websites. There are several widely-used definitions of IL produced by professional bodies in our own field and in collaboration with other organisations; examples include the American Library Association's Presidential Committee on Information Literacy, the Chartered Institute of Library and Information Professionals (CILIP) 'Plain English' interpretation and UNESCO's Prague Declaration (ALA, 1989; Armstrong et al., 2005; Horton, 2006). The definitions vary in wording and length, but there is a shared understanding of the concept, represented here by CILIP's definition of IL for the UK:

'Information literacy is knowing when and why you need information, where to find it and how to evaluate, use and communicate it in an ethical manner.'

Hinchliffe and Woodard (2001) trace visions of librarians as teachers fulfilling their educational role through personalised reference service back to the 1870s (exemplified by Green, 1876). They note the shift in focus within education

institutions from teaching to learning and a parallel shift from training to learning in the corporate sector, which arguably has brought both academic and special libraries closer to the individualised user-centred service model associated with public libraries. However, Hinchliffe and Woodard (2001: 182) also comment on the 'separation of [library] instruction programs from reference services' supposedly resulting from 'accelerated advances in the theory and practice of instruction', observing that this has caused some librarians to ask questions about the relationship between reference services and instruction:

- Are reference and instruction diametrically opposed?
- Must it be either reference or instruction?
- Does instruction detract from or enhance the quality of reference service?
- Is instruction merely an adjunct service to the reference desk?
- Or is reference an adjunct to instruction?

Their views are clear, that 'reference and instruction are intrinsically linked, complementary, and intertwined services' and that 'To separate instruction from reference or reference from instruction is to do a disservice to users' (Hinchliffe and Woodard, 2001: 182); but they acknowledge that instruction at the reference desk, particularly face-to-face instruction, is not always practical (for example when queues build up or where desk hours are limited).

Grassian and Kaplowitz (2001) similarly make explicit links between reference and instruction, arguing that effective IL instruction reduces the number of basic reference questions asked at desks, but typically raises the complexity level of the questions asked. They confirm that 'much of direct reference work with the public these days, in many types of libraries, has to do with teaching or helping people learn to make effective use of a myriad of sources' (Grassian and Kaplowitz, 2001: 18-19). They also specify 'Reference Questions' and 'Individual Research Consultations' among 18 instructional modes for developing IL. Although IL is arguably central to the mission of all library and information services, efforts and achievements in this area have been most prominent in the academic (university and college) sector, followed by the school sector; however, many public and special libraries have in practice provided informal individualised instruction for their users and have developed and expanded their efforts more formally since the 1980s, 'driven by a technological tidal wave and efforts to redefine "library instruction" as "information literacy"' (Grassian and Kaplowitz, 2001: 15). The role of the public library in IL has been better articulated in the US than in the UK; for example, the US Public Library Association (PLA) *New Planning for Results* manual formally identifies IL among 13 'service responses' suggested as strategic options for libraries to select as the service priorities that will best meet the needs of their communities (Nelson, 2001).

## **Trends and developments**

The library landscape has been transformed since the publication of Grogan's (1991) book by the switch to end-user searching of online databases and changes in educational practice that have shifted towards resource-based and inquiry-based learning, which have strengthened the position of the education advocates in the information versus instruction argument. Reference work has been significantly affected by technological developments that have opened up many new ways of

delivering services within and beyond the traditional reference desk in a library building. Berger (1996: 117) assesses early impacts of the 'information explosion' and 'information technology explosion' on reference services, commenting specifically on 'increased demand...for teaching people how to access information sources using current technology' and significant growth in the number of technology-based information products and services. Thomsen (1999: 174) describes the information versus instruction issue as 'one of the oldest and most basic debates in librarianship', but argues that this is a 'false dichotomy' and that librarians 'should focus on service, with the understanding that sometimes education is an important element of service'. Katz (2002: 169), author of another standard reference textbook, locates himself in the group that 'opposes formalized instruction', but similarly counsels against 'false battle lines', stating that technological developments have made informal instruction a necessity and ultimately suggesting a pragmatic approach:

'There is much to be said for allowing the user, no matter what age or position, to determine whether (1) information is wanted, or (2) instructions are wanted, or (3) a combination of both is desirable' (Katz, 2002: 170).

### ***Differentiation and integration***

Academic libraries have experimented with different reference delivery models to meet changing service needs, including tiered services (separating directional and simple queries from complex and in-depth questions), using paraprofessional staff/student assistants on reference desks, evening workshops, roving support, moving librarians out of the library into coffee shops, academic departments and student residences to provide more proactive assistance to users, or embedding them in places where they can teach research skills where and when needed (including class meetings, field trips and office spaces), in stronger collaborations and partnerships (Barrett et al., 2010; Cassell and Hiremath, 2009; Kibbee, 2001; Lessick, 2000; Shumaker, 2009). Commentators have continued to predict increased demand for instruction in this context: Tyckoson (2003) couples this with decreased demand for ready-reference services (short-answer or quick-reference questions). Arndt (2010) reports the complete removal of a reference desk, replaced with referral from circulation desks to an on-call librarian in a new reference consultation model actively promoted by signage, posters, rotating digital advertisements and an Ask-a-librarian website; there were concerns among staff who confused removal of the furniture (a powerful physical symbol) with removal of the service it represented, but the change resulted in consultations by appointment more than doubling. Sinclair (2009: 507) sees the reference desk transformed into a 'technology and learning desk... [a] centralized, blended service point' where peer mentors (student assistants), blended librarians (with IT and educational skills) and IT staff 'provide impromptu hands-on learning opportunities'.

### ***Online reference work***

The growth of online reference services is arguably the most significant development in reference over the past decade. Online reference work has evolved from asynchronous electronic or digital reference using email and web forms to synchronous live or virtual reference using chat technology, videoconferencing, instant messaging and social media, even Second Life (Cassell and Hiremath, 2009;

Gerardin et al., 2008; Kibbee, 2001). Cohen and Burkhardt (2010) describe the use of Skype-based reference for US students studying abroad at a campus in Ireland, showing how videoconferencing can enhance services to distance learners. Digital and virtual reference services are popular in both academic and public libraries: Breitbach and DeMars (2009: 82) claim that virtual reference 'has become ubiquitous in academic libraries', but take-up has varied in different countries, as Barry et al.'s (2010) survey of UK academic libraries found only around one quarter of their sample offered a virtual service, most of which had been introduced within the last two years; in contrast, UK public libraries have been at the forefront of digital reference since the late 1990s, with their Ask a Librarian service described as 'a model for best practice in collaborative digital reference in public libraries' Berube (2004: 29).

### ***Collaboration and partnership***

Pomerantz (2006) discusses the collaborative style that typifies digital and virtual reference, noting the formation of consortia (local, national, multinational and cross-sectoral) for both asynchronous and synchronous services from the mid-1990s and the related development of standards to facilitate question-swapping. He points out the collaborative dimensions of traditional reference, but argues that increasing use of network technologies will make reference work *fundamentally* a collaborative effort in future, with benefits to both individual services and reference work in general. A recent example is the collaborative text reference service, My Info Quest, whose members include 29 academic libraries, 20 public libraries, two school libraries and four regional library organisations: Luo and Bell (2010: 276) note that the different expectations of users served by such consortia make quality control a key issue, confirming the importance of 'unambiguous guidelines on service level, policy and best practices to ensure consistency in service quality'. Collaboration is also a recurring theme in relation to IL, particularly in the context of the faculty–librarian partnerships that are crucial to securing integration into the academic curriculum (Bruce, 2001; Lindstrom and Shonrock, 2006). Hinchliffe and Woodard (2001: 184) see IL programmes in all types of library as being 'on a continuum of collaboration', with instruction provided by the library alone at one end and instruction offered in collaboration with another organisation or group at the other end; teachers and administrators are common partners in universities and schools, special librarians collaborate with other professionals in their organisations, but potential partners for public librarians are more varied, ranging from schools and other educational institutions to businesses, voluntary organisations and community groups – as well as other libraries.

Shared facilities offer opportunities for new and improved collaborative reference and information services. Meserve et al. (2009) report using the Warner four-level question classification to plan a tiered service involving academic and public librarians, paraprofessionals and student assistants in a joint-use university and public library, where face-to-face and e-mail reference is merged, but live online reference remains separate; analysis showed a clear overlap in the kind of information demanded by public and university library users, with more complex questions received through the virtual service than other modes. Many universities have adopted the information or learning commons model to create technology-rich spaces shared by library, computing and educational development or teaching and

learning technology services. Zink et al. (2010: 110) note 'the challenge and opportunity of an information commons exist in a service continuum extending across reference, data, and media services, and include the identification and retrieval, processing and interpretation, and packaging and presentation of information'. They report high levels of collaborative problem-solving and shared learning through student employees and different professions (library, IT and media) working as partners.

### ***Virtual instructive reference***

The continuing centrality of instruction in reference work in the digital environment is shown by the inclusion of 'Instructive' as one of five User Transaction quality criteria for membership of the Virtual Reference Desk (VRD) Network. The VRD criteria specify that 'Services should offer pointers and paths used to find the best resources, so users can learn to answer similar questions on their own' and that '...services should promote information literacy by responding with detailed search paths and sets of resources that either provide the answer or allow the user to investigate on his or her own' (Bennett et al., 2000: 74-75). VanScoy and Oakleaf (2007) note that many librarians expected virtual reference to be used like the telephone mainly for quick reference questions, but subsequently found a significant amount of virtual reference interaction could be described as one-to-one instruction, citing two university libraries where instruction featured in 60% and 83% of interactions respectively. They explain that slow typing speeds and the lack of non-verbal communication can make virtual instruction frustrating, but it has the advantage of enabling specific, individualised instruction in real time at the point of need and also generates transcripts that can be used for both assessment of learning and evaluation of teaching. Devlin et al. (2008: 228) analysed 2,300 chat transcripts to identify practices, behaviours or techniques that were successful in engaging students and facilitating learning, concluding with a list of 'top ten' best practices for instruction that can be used to train chat operators. However, they note that 'most of these techniques were strongly similar to behaviours modelled in successful person-to-person exchanges' and were proven reference interview techniques (e.g. establishing conversational rapport with the user). Email reference is also used for messages with 'instructional intent' (Portree et al., 2008).

Harding (2008: 161) reports that several recognised IL experts have asserted that capitalising on one-to-one teachable moments such as a reference interview 'is the most effective option for information literacy instruction' and argues that this style of support 'provides the opportunity to expand from basic how to instruction into the more cognitive aspects of information literacy such as recognition of information need and evaluation of sources' and 'has the additional advantage of allowing an individual to see the applicability of information literacy in solving a real information problem'. Devlin et al. (2008: 223-224) confirm teaching at the reference desk as a 'widely accepted practice', noting that academic librarians habitually look for such opportunities to teach IL skills to students and arguing that chat reference similarly 'presents a unique opportunity to reach out to students at a time when they may be more receptive to learning'. Moyo (2006: 220) and Wasik (2008: 168) both provide specific examples of 'instructive reference', showing how informal IL instruction that has traditionally been part of everyday reference transactions has continued in the virtual environment:



- guiding users in navigating library web resources
- providing search tips and tricks/suggestions
- suggesting appropriate databases to use and why
- explaining features of particular databases and how to use them
- helping users formulate search strategies/effective keywords for search engines
- instruction in the use of the OPAC
- helping users to understand the components of bibliographic citations or records
- helping users to understand search results.

### ***Comprehensive information literacy***

The development of IL as a field of specialist practice is shown by the growing volume of literature on IL recorded in the annotated bibliographies published in *Reference Services Review*; the founding of new specialised peer-reviewed journals, *Communications in Information Literacy* and the *Journal of Information Literacy*; and the establishment in 2005 of the Librarians' Information Literacy Annual Conference (LILAC) as a UK-based counterpart to the long-established and hugely successful US Library Orientation and Exchange (LOEX) annual conferences. Its emergence as a professional specialism is also evident in the attention now given to the education, training and development of practitioners working as IL educators: library and information science schools have significantly increased coverage of IL and instruction in their programmes (Aproles et al., 2008; Mbabu, 2009) and substantial numbers of practitioners are taking short in-service training courses to develop their teaching skills and/or extended further education programmes leading to formal qualifications as teachers to add to their library credentials (Bewick and Corral, 2010). In addition, the Immersion Program offered annually by the Association of College and Research Libraries since 1999 now offers four different one-week tracks to give teaching librarians at different stages of development 'the intellectual tools and practical techniques to help your institution build or enhance its instruction program' (ACRL, 2010).

IL developments in public libraries and workplace settings are less evident in the literature than initiatives in the educational sector. However, Harding (2008: 164) argues that published evidence from around the world shows that 'public libraries are actively and creatively meeting the information literacy development challenge', which she links with growth in electronic information, especially Internet-based resources. Her analysis suggests that public libraries are well placed to play their part in IL development, by virtue of their recognised role in learning, their lifelong relationship with members of their community and track record in forming partnerships. However, she notes that they may be constrained by the unwillingness or inability of their staff to fulfil a teaching role (because of skills gaps related to teaching and/or IL) and also identifies significant weaknesses in their present approach, such as a lack of frameworks to guide their efforts (in contrast to the standards used in schools and higher education) and a tendency 'to address elements of information literacy development rather than the process as a whole' (Harding, 2008: 160).

Kirton and Barham (2005) note that 'special librarians have written comparatively little on the topic of information literacy in the workplace', but provide some useful examples from industry, law firms and the government sector showing

how the ability to locate, evaluate and use information effectively is 'vital to the success of any organisation'. Crawford and Irving (2008) offer a model for public and special library involvement in IL development in their account of how the Scottish Information Literacy Project has successfully progressed beyond a National Information Literacy Framework linking secondary and tertiary education to a more inclusive document covering IL development from early years to workplace skills and lifelong learning, attracting strategic partners and professional contacts in several sectors, including public, government and health libraries and information services (as well as interest from across the globe).

## **Strategic issues**

### ***Staffing***

*Who should be involved in reference/information service and what should their roles be?* Many practitioners see reference as the exclusive preserve of professionally-qualified librarians, regarding it as the 'most complex and "professional" work in the library' (Bunge and Bopp, 2001: 19). Some librarians therefore oppose the involvement of others in reference, but most accept or indeed welcome the widespread use of paraprofessionals, student assistants, "techies" and other specialists as a pragmatic response to the technological advances and financial constraints of the present environment. What roles should the different players have? Jennerich and Jennerich (1997: 40) report that paraprofessionals 'are often in charge of reference areas', but Lessick (2000) describes the paraprofessional role as simply providing basic information services and making referrals to individual subject specialists or a research consultation service. Hinchliffe and Woodard (2001) note that many categories of staff may be involved in producing handouts or delivering sessions.

McClennen and Memmott (2001) have relabelled roles for the digital reference environment as Filterer (covering both referrals and stock answers), Answerer, Administrator and Co-ordinator. Models such as Warner's four levels of questions (Meserve et al., 2009) and Whitson's (1995) widely-cited five types of information service (basic, technical, broking, consultation and instruction) can be used to analyse service demand and assess staffing needs, but the reality of providing timely help in multi-use physical and digital information environments may make separation of duties into neat categories unworkable. Equally, Thomsen's (1999: 43) ideal of paraprofessionals (or student workers) fulfilling the literal meaning of the term through working 'by the side of' professionals is not always feasible for cash-strapped libraries and isolated service points. However, the overriding message from current literature is that help at all levels more often than not has a significant educative dimension and we need to recognise the mentoring and teaching roles fulfilled by both professionals and other workers in contemporary settings.

### ***Skillsets***

*What mix or blend of knowledge, skills and other attributes is needed by people fulfilling the referral and informational, educational and instructional roles described in the literature?*

Although commentators have long recognised the need for reference librarians to be able to demonstrate and explain the use of databases, many lists of competencies in older literature focus on informational, interpersonal and organisational/managerial abilities, with only a few explicitly including instructional/teaching skills (Scherrer, 1996). Similarly, though the profession acknowledges that paraprofessionals need to be able to teach users about library resources, publications dealing with their training generally concentrate on locating and evaluating different types of information sources, with some coverage of the reference interview/communication skills, but apparently prioritising *what* they are expected to teach over *how* they are expected to do it (Jennerich and Jennerich, 1997; Morgan, 2008). The Digital Reference Education Initiative includes the instructional role among ten areas of competency defined at three levels to accommodate different categories of staff, but the focus again is on *what* staff teach, rather than *how*, with no mention of learning theories or teaching techniques (Wasik, 2008).

In contrast, literature with an explicit focus on IL development or the instructional dimension of reference work sends a clear message that information specialists involved in teaching and training need at least a basic understanding of the theories underpinning the methods they use, in addition to familiarity with a range of instructional approaches (Grassian and Kaplowitz, 2001; Hinchliffe and Woodard, 2001). Bell and Shank's notion of the 'blended librarian' also specifies a broader combination of skillsets than traditional reference competency lists, combining traditional library expertise with skillsets from the fields of IT and instructional design (Sinclair, 2009). Hinchliffe and Woodard (2001) note that staff other than librarians may be involved in instruction, but stop short of discussing the level of pedagogical knowledge and skills they might need to deliver sessions or produce handouts, whose design should take account of different learning styles in the same way that an instructional intervention should (Thomsen, 1999).

## **Strategy**

*How should library and information services define, scope and present their reference, information and instruction roles and goals in policy documents and planning statements?*

Some universities have published formal IL policies and strategies, linked to their educational and/or library strategy statements, thus making a public commitment to IL education. Many educational institutions include IL objectives within other strategy documents and public libraries have also prioritised IL in their plans, illustrated by the three examples documented in the PLA manual (Nelson, 2001). However research in the UK found few strategies or policies explicitly acknowledged the less formal IL instruction that habitually takes place at the physical or virtual reference desk (Corrall, 2007; Corrall, 2008). Critically, although the continuing professional development needs of staff engaged in instruction were prioritised in many cases, with reference to both educational theory and teaching techniques, only one of these UK institutions included training for frontline staff as a 'key principle' of its policy:

'All staff with contact with readers will be trained to be aware of the importance of

developing information skills in readers when they provide assistance' (Corrall, 2008: 32).

Libraries similarly can use reference service policies and strategies to communicate the different functions of the service and explain how the service is designed to fulfil both informational and educational purposes; Thomsen (1999) reproduces an example of a Reference Policy from a US public library that includes a section on 'Instruction', thus making it explicit to staff, users and other stakeholders that this is an important dimension of the service. Arguably the key requirement here is to connect the different policies and strategies together: academic librarians have articulated the need to improve co-ordination within the library and the institution (Corrall, 2008), but as a profession we also need to advance policy and strategy at the network level, building on success in developing standards and protocols in the context of virtual reference consortia (Bennett et al., 2000; Pomerantz, 2006) and learning from examples of cross-sectoral collaboration, such as the Scottish Information Literacy Project (Crawford and Irving, 2008).

Evidence points to the need for us to progress reference and instruction efforts through an 'interactive planning' model, defined by Ackoff's (1981) three key principles:

- *participative* – engaging and interacting with all key stakeholders in developing strategies;
- *continuous* – watching and acting on technological and other environmental changes;
- *holistic* – including and co-ordinating the activities and plans of all relevant players.

Service policies and strategies of individual libraries need to be related externally to their local communities, professional networks, national organisations and global developments, but also need to be supported internally by more comprehensive staff development and training plans, based on competency frameworks that articulate the instructional knowledge and skills needed by those involved in 'instructive reference', in addition to their informational, technological, interpersonal and organisational competencies.

## **Conclusion**

Library reference services and IL instruction have been transformed by technological advances, social changes and educational developments. The reference desk has gained mobility and ubiquity, reaching out to users in new territories, physical and virtual. IL has infiltrated the educational curriculum, moving beyond the library and the classroom to the policy and strategy arena, locally and globally. At the operational level, professional and paraprofessional roles have evolved, with specialist practitioners expected to perform at higher levels and new specialties emerging for a digital world where cross-functional boundary-spanning activities in technology-rich environments are the norm.

Research shows that the role of instruction in reference is universally acknowledged and it continues to feature strongly in both face-to-face and digital reference transactions, but it is often not properly articulated in formal policies and

plans, particularly in respect of workforce development needs and priorities. This strategy gap is a significant weakness in library efforts to develop IL. There is also an important opportunity for further development of IL strategies at the network level to improve alignment of professional practice across sectors and facilitate lifelong IL education in society.

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