The subject specialist in higher education – a review of the literature

Introduction

The concept of the subject librarian has been defined as a 'librarian with special knowledge of, and responsibility for, a particular subject or subjects …' (Feather, 1997). The role is under threat from increasing demands on the post holder such as the need to understand the complexities of electronic resource provision; liaise with academic departments and provide information skills training. Consequently, some writers such as Heseltine (1995) and Gaston (2001) argue that the original role of subject librarian has disappeared while others such as Pinfield (2001a) argue that the subject librarian has become more flexible and has adapted to changing circumstances. Parallel concepts have evolved alongside the subject librarian such as the tutor librarian, a term first applied at Hatfield Polytechnic in the 1960s (Harrison, 1990, p. 43) and encompassing the recognition that the role of the academic librarian extended beyond selection and management of materials to embrace user education, and the academic liaison librarian, where emphasis is placed on the working relationship with the faculties.

The subject based model was first introduced into the United Kingdom as an alternative to the functional model at University College London by RW Chambers (University College Librarian 1901-22), adopted at the University of Leeds in the 1930s under Richard Offor and then spread to other universities. The appointment of subject specialists to improve reader services was recommended in the Parry Report (University Grants Committee, 1967) and remained popular throughout the 1960s and 1970s. This concept was epitomised at the University of East Anglia by Thompson (1975), who, as the English literature specialist claimed to have built up 'one of the best and least accidental collections in the field'.

Even when subject expertise was the dominant criteria, research shows that there were wider requirements, for example, technical and language skills. The role has also generally included a combination of liaison with academic departments; stock selection and maintenance; enquiry work and user education; cataloguing and classification (where not done centrally) and wider functional and managerial responsibilities (Pinfield 2001a, p. 33). Latterly, organisational change and the demands of new technology means that there has been more emphasis placed on liaison with users; adoption of new enquiry techniques and selection and provision of electronic resources. Information skills training and involvement in learning environments have become more important as have team working skills and project management skills (Biddiscombe, 2002 p. 232).

The changing role of the subject librarian in academic libraries has been discussed in the literature over the past few years (Akeroyd, 2001) (Pinfield 2001a, 2001b) (Gaston 2001) and (Biddiscombe 2002). This chapter looks at the influences, challenges and opportunities facing the subject librarian and how these factors have redefined the role .

External influences

This section will show that changes in the role of the subject librarian over the last few decades reflect changing attitudes to both the organisation and strategy of the academic library.

A shift in the concept of what the library means

Wolff (1995) argued that convergence of services, the technological revolution and knowledge explosion have all resulted in libraries adopting a fundamentally different role over recent decades. Wolff suggested that prior to the 1980s; the focus of libraries was on holdings. With the explosion in knowledge aided by technology it is impossible for collections to contain everything and the emphasis changed in the 1980s to ensuring access to material, both via electronic resources held remotely and via co-operative access arrangements with other organisations. From 1995, libraries have concentrated on the use of the resources and placed greater emphasis on the acquiring of information skills. Wolff predicts that by 2010, libraries will be concentrating on learning transformation, playing a leading role in the provision of resources in a format suitable for the new pedagogical approach adopted by the Virtual Learning Environment (VLE).

The organisational model

Major surveys of subject specialisation in university libraries were carried out in 1982 (Woodhead and Martin, 1982) and 1996 (Martin, 1996) and a third survey extended to include polytechnic libraries in 2000 (Reid, 2000). Woodhead and Martin argued that in all libraries, a certain range of work has to be done including stock selection, liaison with academic departments, acquisitions, cataloguing, classification, shelf-arranging, borrowing services, document delivery, enquiry and advisory work, literature searching, current awareness and user education. They suggested that there was a range of organisation models that had been adopted based on a proposal by Scrivener (1974) (Woodhead and Martin, 1982 p. 98 and Martin, 1996, pp. 160-161) and that the various models adopted by the libraries at different times have impacted on the role of the subject librarian Martin's research indicated that by 1996, there had been movement away from the hybrid model (staff with both responsibility for own their subject area and other centralised functions) and three-tier organisational structures (senior staff have subject responsibility with remaining functions being the responsibility of middle grade staff supported by library assistants) with movement towards a dual model (some senior staff have subject responsibility while others are responsible for the remaining centralised functions) which accommodated 63 per cent of respondents from higher education libraries. One also saw the emergence in the 1996 survey of the subject divisional

model (teams of both senior and supporting staff with each team located in and responsible for physically separate parts of the collection and underpinned by centralised functions). Martin (1996) sites several factors for a move from the three-tier model: increased size of operations, increasing professionalism, decreasing importance of book selection and the impact of information technology.

Research by Martin (1996) and Reid (2000) revealed a move towards less hierarchal structures and team working in which front-line staff are in more direct communication with the decision making process. This often means school/faculty teams with a range of staff levels – and in a converged organisation – different professional background. This convergence results in librarians embracing new tasks such as mediation of electronic resources, identification of choice of delivery, licensing, interface selection or creation, platform advice, promotion and training.

Centralisation of functions and the rise of the para-professional

A number of writers: Woodhead and Martin (1992), Brophy (1998) and Biddiscome (2002, p. 228) argue that there are several key processes in all academic libraries that do not require a qualified librarian and that while information access and information enquiry service have generally remained the provenance of the subject librarian, other areas of responsibility such as acquisition, cataloguing and classification, document supply services have been increasingly devolved to central functional and para-professional staff (Pinfield, 2001a, p. 34), (Biddiscombe, 2002, p. 228). Sandler (1996) quoted in Corrall (2004, p.26) also points to an 'ascendant class of IT savvy librarians and paraprofessionals' and a decline in the numbers of professionally qualified staff employed, a position predicted in the Fielden Report on Human Resource Management in Academic Libraries (John Fielden Consultancy, 1993 paras.3.24 - 3.30).

Convergence of services

Martin quotes Richard Heseltine (Martin, 1996, p. 147) as predicting the end of the subject librarian because Heseltine argued that the delivery of end user services will become more systemised and result in the convergence of learning support services. For users, the distinctions between library, computer centre and media resources centres will fade as students start to use and access learning resources from a variety of locations. Ultimately Heseltine predicts "service convergence round broad functional responsibilities" will overtake the generic model of subject librarianship.

The Fielden Report commissioned by the Higher Education Funding Council (John Fielden Consultancy, 1993) as a result of the Follet Report (Joint Funding Council, 1993) reported that convergence had been the main driver of change in the organisation of library services in the USA and UK over the previous 8 years. The study identified two

different types of convergence – 'organisational or formal convergence' in which two or more services are brought together for managerial purposes (paras. 2.25 - 2.27) and 'operational or informal convergence' (paras. 2.28 - 2.30) in which the detailed functions and operations of the services are changed or are brought together. The report suggested that it was not necessary to have organisational convergence to have operational convergence - it could be sufficient for the heads of the two services to undertake joint strategic planning.

Although the concept of convergence first originated in the United States of America in the 1980s, it wasn't until the late 1980s and early 1990s that changes relating to operational convergence really became visible in the United Kingdom, mainly resulting from the opportunities arising as a result of the retirement of the librarian or head of computing services. The 1988 issue of the British Journal of Academic Librarianship is devoted entirely to the topic. The first UK university to "merge the major academic services at an operational level" (Harris, 1988) and have a merged service with a single executive head (Lovecy, 1994. p1.) was the University of Salford which merged its computing services with the library to form an academic information service. Other early adopters included Roehampton Institute and Liverpool John Moores University (Sykes and Gerrard, 1998).

Further research by Lovecy in 1994 indicated that different models of convergence had been adopted by different universities ranging from the 'meeting between the heads of the services" at one end of the spectrum to 'the single service administered by one officer in which many staff cannot claim to be either Library or Computing staff". The Fielden Report (John Fielden Consultancy, 1993) predicted that operational convergence would be the norm with integrated library and information service strategic plans and joint network management. Fielden also prophesised the start of 'academic convergence through learner support' (para. 3.17), defined as 'activities within library and information services that exist to support individual learners' with the professional staff expected to play a greater role in learner support and liaison with academic staff. Typically this included user education, mediated access to databases and tailored navigational support (help given by information librarians with subject specific knowledge to staff or students wanting to use the most appropriate resources for their subject).

Morgan and Atkinson (2000) estimate that as many as 60 institutions have converged in the UK. In 1995 the University of Birmingham amalgamated four separate units: library, academic computing service, television service and computer based learning, which, with the additional of language laboratories and lecture theatres in 1998 became the largest converged service in an academic institution in the UK (Shoebridge, 1998). The University combined staff from all the different parts into multifunctional academic discipline based teams, making it a real example of operational convergence. Most convergences in the late 1980s onwards were with computing services although since 1995, a different configuration has appeared with libraries choosing to align themselves with learning support departments, thereby placing the focus on the learner rather than seeking operational efficiency. Some library departments have merged, demerged and

subsequently aligned themselves with different services, for example the Universities of Luton, De Montfort and Northumbria. In such cases, the library services have moved away from close partnerships with computing services often based on the fact that historically libraries were heavy users of IT services, to more closely align themselves with learning support departments, better recognising the role that libraries play in the learning process.

The challenge of disintermediation

According to Biddiscombe (2002, p. 228), we are seeing a two-fold change in libraries as paraprofessional staff take over the tasks of professional librarians and end-user empowerment, mostly as a result of the World Wide Web, means that end users can increasingly satisfy most of their information needs and demand access to academic services away from a fixed location .

The ability of students to directly access materials results in disintermediation. Sturges (2001, p. 63) argues that the introduction of the online database and later the CD-Rom originally enhanced rather than decreased the librarian's role as most early databases were only bibliographic and the assistance of the librarian was still required to interpret the information in the database and locate the original article. The emergence of full text databases and greater familiarity with internet technology, however, offers the user more independence and has therefore reduced the demand for a librarian as an intermediary. Furthermore, database suppliers providing in house training staff or training up students to provide training to other students are all challenges to the role of the librarian. Both Mougayar and Sawhney, however, quoted in Biddiscombe (2002, p.229) see a continued role for the 'informediary', providing the 'mechanism for aggregating customers and suppliers, thereby facilitating exchanges, creating and capturing value in the process'.

The 'Google factor' (the preference for students to resort first to the Internet) presents a challenge to the subject librarian. Armstrong (2001) and colleagues working on the Justeis project – 'Monitoring and evaluating user behaviour in information seeking and use of information technology and information services in UK Higher Education' found that students initially went to websites first and made low use of library sources such as bibliographic databases, ejournals and web databases. A survey of electronic information resources used by undergraduate and postgraduate students (Lonsdale and Urquhart, 2001, p.36) revealed that search engine use was identified as the first choice and cited by 75 per cent of users compared with email (27 per cent) OPAC (23 per cent) and web based databases cited by 10 per cent of students. Similar results were derived from the 'Formative Evaluation of the Distributed National Electronic Resource' (EDNER) project (Griffiths and Brophy, 2001) where 45 per cent of students used the Google search engine to locate material on set tasks, compared with 10 per cent for the Online Public Access Catalogue (OPAC) and 9 per cent for Yahoo. Nevertheless Sturges still argues that there will be a continuing role for the librarian (Sturges, 2001, p. 63) for

while skilful independent researchers will largely continue to ignore the function of the librarian, the vast majority of people will continue to prefer to receive the most important parts of the information they need through an intermediary.

The challenge for the librarian is to prove the role that they can play, what Sturges (2001, p.65) calls reintermediation. Marfleet and Kelly (1999) describe this as the demystification of information retrieval in which the librarian must recognise the greater independence of the end user and rather than fight it, use their energies instead to enhance services. The librarian is still required to be the intermediary between the vendor and the supplier, make decisions on how the resource should be accessed and provide training to the end user. Finally search engines still work on the principle of keyword searching, a concept generally unfamiliar to many information users which emphasises the need for skilled searches, normally with the assistance of the librarian.

Both Akeroyd (2001, p. 93) and Corrall (2004) point out that the increased use of the Virtual Learning Environment (VLE), seen by so many as an opportunity for libraries, could also lead to disintermediation. Libraries have traditionally provided access to electronic resources via the library homepage, information skills training materials and subject gateways. The ease, with which academics can now link to electronic resources, often provided by the library, but without communicating or consulting with the library staff over resource descriptions threatens the library's role. VLE's also tend to offer course restricted access and this may be at odds with the institute-wide provision adopted traditionally by libraries. McLean (2002) quoted in Corrall (2004, p.19) argues however, that such situations can also offer opportunities to those librarians prepared to collaborate closely with academics and educational technologists and accept a redefinition of boundaries between the library and other domains.

Government policy: widening participation and tuition fees

As part of the widening participation agenda, the Government has set targets of 50% entering higher education within the next 10 years. Amongst this larger population entering higher education have been those who have not been previously exposed to independent learning or environments where information literacy is encouraged. This observation has resource and staffing implications for libraries as they meet the challenge of ensuring that such students are not disadvantaged by their lack of information literacy skills. Students are also becoming increasingly demanding of library resources and services as they seek to get what they regard as "value for money" in return for their tuition fees.

In conclusion, the role of the subject librarian has been affected by organisational change and the trend for convergence of services, and cultural changes within society as the Internet revolutionises the way we access information and more people enter higher education.

Changing emphasis in the role of the subject librarian

Having established the external influences that are reshaping the role of the subject librarian, we will now analyse the effect these influences have had on different aspects of the subject librarian's role.

The subject librarian as subject expert

Over time there has been a change of emphasis relating to the subject knowledge of the subject librarian. Traditionally the subject librarian may have had a first or second degree in the subject area that they support but increasingly librarians have been asked to cover a wider subject remit than the subject in which they have a qualification Recent surveys indicate that many librarians do not necessarily have a qualification in the subject they support. This change reflects not only the organisational trends within libraries but also a broader shift in traditional disciplines with a wider range of degrees now on offer. The SPTL/Academic Law Library Survey 2000/2001 (Jackson, 2002) revealed that of 62 responding institutions, only 15 respondents had at least one member of staff with an academic or professional qualification in law. A survey of academic law librarians in British and Irish Universities in 2000/1 (Young, 2002) looked at the extent to which law librarians have responsibilities other than law. Out of the 66 respondents, only 21 or 31.8 percent had no other responsibilities. A total of 35 additional subject responsibilities were noted ranging from accountancy and business to sociology, government, social work and education. Many of the law librarians also had responsibility for European Documentation Centres, official publications and special collections. Taking into consideration operational responsibilities such as desk duties; acquisitions; cataloguing; management of staff and information systems, nearly two-thirds or 60.8 per cent of respondents had responsibilities other than law although the degree of time taken with those roles varied.

Pinfield (2001a, p. 38) argues that while advantageous to have a first degree in a related discipline, what is crucial is that the subject librarian has an appreciation of teaching and research techniques in their subjects, and in the structure of the literature and in key terminology and concepts. This opinion is reinforced by Battin, who Corrall quotes (2004, p.33) in support of her belief that the new electronic environment will place a greater need for the subject librarian to have a deep knowledge of a discipline's primary questions. Writing from an academic's viewpoint, Toft (2004, p.43) places emphasis on the subject knowledge, commenting that academics primarily want librarians with specialist knowledge with whom they can communicate at the same level as with colleagues. Simester (2000) suggested that the conceptual separation of academic departments from the library needs to be reviewed: he argued that for universities to produce high quality research and teaching, there needs to be good co-operation between academic departments and

library and that the current division between academic and support departments may be both artificial and counter productive.

The subject librarian as liaison librarian

The increasing emphasis on liaison with both academic departments and student users is reflected in the recent use of new titles for subject librarians – Faculty Liaison Librarian, Academic Liaison Librarian etc. Woodhead and Martin's surveys in 1982 (Woodhead and Martin, 1982) and 1996 (Martin, 1996) have shown a shift away from a term denoting a subject specialist. Terms in use in 1982 included: subject librarian; subject consultant, reference librarian, tutor librarian and liaison librarian. Although the second survey in 1996 indicated that half the respondents were still using the term subject librarian, a wider range of alternative terms were coming into use including: faculty librarians; subject support officers, academic librarians, link librarians, information librarians and information specialists. Reid (2000) suggests that the newer terms both indicate a 'proper caution about pretending to specialist knowledge that the bearer may not have' and an emphasis on 'information' and 'support'.

The subject librarian as information expert

Lester quoted in Woodhead and Martin (Woodhead and Martin, 1982, p. 102) speaking at a SCONUL Information Services Group Conference on Subject Specialisation in 1982 argued that ' ... our libraries increasingly need "information specialists" and not "subject specialists" … an academic must find in his or her subject specialist librarian, first and foremost someone with a wide and competent knowledge of librarianship; who knows, or at least knows where to find out, about those specialised areas of librarianship that the academic is ignorant of '.

The librarian's familiarity with Internet searching and meta data offers opportunities for skilled practitioners to apply accurate and helpful descriptions to resources. Rikowksi quoted in Sturges (Sturges, 2001 p. 66) sees a new role for the subject librarian as providing a 'bridge' between the subject matter and the emerging technologies. He believes that library staff can, in co-ordination with others, play a leading role in helping faculty understand both how to access information and integrate technology and new information resources into the curriculum. Wolff (1995, p. 85) also believes that as most librarians adapt to new technology, usually in advance of academics, they may become an important source of student learning about technology, its limits, uses and integration into all elements of life. Such developments also allow librarians to position themselves as specialists who complement academics. Court and Rayner (2001, p. 234) quote

a librarian who believes that with the growth of information sources available, subject librarians are becoming 'specialists within their fields and increasingly complementary to academic staff whose subject specialties are becoming narrower'.

The subject librarian as hybrid librarian

Developments in technology have acted as an agent of change over the years. Libraries were early adopters of technology with the library management system and have continued to take advantage of developments to use it as a means of providing bibliographic information and latterly full text online content. We now have the hybrid library, defined by Rusbridge (1998, p. 18) as integrating 'access to all … kinds of resources … using different technologies from the digital library world, and across different media'. The role of the librarian has consequently changed from custodian of a physical collection to that of supporting the networked information user. With the emergence of the Internet, academic users now expect 24/7 access to resources from anywhere, made all the more possible by disintermediation.

The move from holdings of information in-house to electronic access to remote sources has changed the emphasis of work from physical collection management to facilitating and managing electronic resources. Librarians, who have traditionally had expertise in negotiating one-off access contracts to print materials have had to take on all the complexities of electronic provision including differing formats, variable pricing models, usage restrictions and ownership rights.

The systems librarian has now been joined by the e-journals coordinator, HERON advisor and special project co-ordinators. In some libraries, such responsibilities are being fulfilled as additional functions of substantive posts, elsewhere new posts have been created such as the eServices Collections and User Support Manager as at the University of Sheffield (Tattersall, 2004). In some circumstances such posts are fixed term posts to allow resources to be placed into getting projects started, for example the JISC funded Exchange of Learning (X4L) programmes.

While subject librarians have traditionally found themselves out on their own as early adopters of technology, there are now a range of departments within an institution utilising web resources and educational technologies necessitating co-ordination with other departments such as learning support departments. Many libraries, taking advantage of the skills that their subject librarians have developed in handling electronic resources, have extended their remit to cover the electronic distribution of institutional information such as student handbooks, exam papers and reading lists. According to Corrall (2004) some are even getting involved in digital asset management, scholarly communications and institutional publishing via open access projects.

Against a background of free and easy access to both quality Internet resources such as the Resource Discovery Network (RDN) and sometimes less authoritative documents found using general search engines, the challenge for

librarians according to Brophy (1998) will be to ensure that they continue to 'define a role for themselves in relation to electronic information resources that is regarded as legitimate and necessary by academics and which justifies a continuing allocation of the institution's budget'.

The subject librarian as tutor librarian / learning facilitator

Many writers argue the future role for the librarian is that of an educator or learning support professional (Biddiscombe, 2002 p. 230). Librarians are already taking on the role of the initial mediator and facilitator of resource-based open learning, with increasing responsibilities for first line instruction and supervision of students.

Prado (2002, p. 203) argues that until recently, the only barrier to accessing documentary information was alphabetisation but now an equally powerful new barrier has emerged: technological skills. It is no longer sufficient for the librarian to make the information available; the students need to acquire the information handling skills in order to be able to use it effectively. Since the 1990s there has been increasing emphasis on information literacy, defined by the American Library Association Presidential Committee on Information Literacy (American Library Association, 1989) as the ability '... to recognise when information is needed and have the capacity to locate, evaluate and use effectively the needed information'. Encompassing both IT and information skills, according to the SCONUL model (SCONUL,1999) information literacy programmes should provide at the minimum, bibliographic instruction and at best, should be integrated into all curricula as a learning outcome of higher education. Attempts to fully integrate information skills into academic curricula have met with mixed success but the adoption of VLEs amongst higher education institutions currently offers the opportunity for engagement with academic staff in the provision of resources and training.

The Association of University Teachers in its report on building the academic team (Association, 2001) recognised the contribution made to student learning by academic related staff, and especially librarians, calling on employers to view academic related staff as partners with academic staff in providing higher education. Increasingly, it is not sufficient for the librarian to 'train' students in the use of library resources but have a real understanding of the pedagogy of teaching. Many librarians have felt the need to gain formal educational qualifications to become valued by academics – Court and Rayner (2001) cite one librarian as saying 'It is important that we are seen as equal team members – this is why I went for the PGCE a couple of years ago.' Others have become members of the Higher Education Academy Relevant qualifications are likely to become increasingly important as librarians position themselves as learning support professionals. Biddiscombe (2002, p. 230) sees such staff as becoming less library based in the future with weakening links to the traditional library structure.

The subject librarian as collaborator

Having recognised that no one library can encompass all knowledge within its collections, the subject librarian has started to work collaboratively (mainly but not exclusively with other academic libraries) to widen access to resources and find common solutions to common problems. The ELIB projects are an example of co-operative working on hybrid library projects which developed out of the Follett Committee recommendations (1993) that funds and effort be devoted to the concept of the hybrid library. Later projects have concentrated on looking at the integration of systems and services in both the electronic and print environment. Simester (2000) argues that subject specialists often have more in common with subject librarians in other universities than with their own colleagues and that librarians should be considering a more collaborative approach to work, as already adopted by academics.

The Future

The digital librarian

As libraries move away from the hybrid – print and electronic access approach, one may see the emergence of the cyberarian or digital librarian , defined by Sreenivasulu (2000, p.12) as ' a specialist information professional who manages and organises the digital library, combines the functionality for information, elicitation, planning, data mining, knowledge mining, digital reference services, electronic information services, representation of information, extraction and distribution of information, co-ordination, searching … and retrieval'. Sreenivasulu goes on to say that the ultimate goal of a digital librarian is to 'facilitate access to information just–in-time to the critical wants of end users and additionally to facilitate electronic publishing'. Digital librarians will need to have knowledge of 'searching, web authoring, archiving digital documents, meta-indexing, speech recognition, searching of images and digitisation amongst many other skills'.

Future challenges

New models of library provision mean that it will no longer be possible to predict information requirements in advance – the current 'just in case approach' will be replaced by 'just in time' (Fourie, 2004 p. 67). Courses' use of information will be more dynamic with teachers changing the emphasis rapidly to response to changing developments. The best library

services will succeed by where they become an integral part of the learning process and the subject librarian is more involved with course planning.

Wolff (1995, p. 88) argues that the next stage of development for the library is to serve as a full partner in transforming the act of learning. 'The main point is the library needs to be taken out of its confining role as support service and seen as a central element in any institution's response to the learner of the future' and the next challenge is that 'Technology and the information explosion will affect not only the quantity of information available and our access to it but the very definitions of knowledge and learning … learning will change as will process – what does it mean to prepare students for a future where there will always be more readily accessible information on any topic than can be mastered? …where the content as well as the underlying foundational principles of the disciplines … may change at least once (if not more often) during the individual lifetime?' (Wolf, 1995, p.88)

As has been demonstrated, the academic librarian is expected to embrace new technologies and working practices as well as maintaining a working knowledge of the subjects they support.

Conclusion

Librarians have sought to acquire the skills that Pinfield (2001b, p. 11) identifies as necessary for the modern subject librarian. They have become comfortable with a wide range of formats; adopted an intermediary role using both their good knowledge of sources and user requirements and ability to negotiate with suppliers, and become enablers – proactively connecting users with the information they require. In addition, they have become educators – teaching information skills and information literacy and a publisher of training materials (Fourie, 2004 p. 67)

Many are already working with teams outside the library, building the new partnerships with pedagogic experts, document managers, publishers and other information businesses, both internal and external to the organisation within which they work, that Akeroyd (2001) and Biddiscombe (2002) see as essential for future development of the role. They have become team players, project managers and innovators, working with colleagues in library and IT services and with academics.

The subject scholar is no longer the most appropriate model for many organisations. Indeed Reid (2000) argues that the transition has already been made with subject knowledge having become a secondary concern and subject responsibility in reality, being no more than a convenient means of assigning limited areas within which knowledge of resource need and availability can be developed to a 'high degree of compass and depth'.

Finally Gaston (2001, p. 33) argues that, rather than disappear, subject librarians have continuously adapted their roles around a liaison function, which has always differentiated them from other members of the library. If one views

academic liaison as the key role of a subject librarian, then a coherent thread of continuity between the past, present and future is clearly identifiable.

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