

Research Support through Resource Sharing: challenges and opportunities for Irish Academic Libraries

Avril Patterson, James Joyce Library, University College Dublin.

Abstract

Purpose: To outline current resource sharing initiatives in Irish academic libraries that support increased research activity in line with national policy. This paper points to the challenges and opportunities such initiatives present.

Approach: Review article based on practice.

Originality/value: A synthesis of current practice, outlining current shortcomings and challenges. Of interest to all librarians concerned to learn more about resource sharing in the British Isles and in particular in the Republic of Ireland.

Keywords: Resource sharing, collection development, electronic resources, consortia academic libraries, research support, research funding, information literacy, professional development,

Paper Type: Review

INTRODUCTION

The development of Ireland as a knowledge society in the global economy is one of the aspirations of the Irish Government, and its policy on investment in research and graduate education is seen as key to its realization. The National Development Plan for 2007 to 2013 foresees a massive investment of €7.5 billion in Science, Technology and Innovation, and aims also to double the number of Researchers and PhD students in universities by 2013, to drive the country's research agenda and to meet industry's growing demand for a highly qualified workforce (Irish Universities Association, 2007)

There has been a substantial research investment in Ireland in the past decade. Now celebrating its tenth anniversary, the Programme for Research in Third-Level Institutions (PRTLTI) has invested €865 million (exchequer and private matching funds) to date into strengthening national research capabilities via investment in human and physical infrastructure, providing integrated financial support for institutional strategies, programmes and infrastructure in key areas of research spread across all disciplines (Higher Education Authority, 2009). Established in 2000, The Strategic Innovation Fund (SIF), which is a multi-annual fund, has to date allocated in excess of €1 billion to support innovation in higher education institutions, placing particular emphasis on enhancing collaboration between higher education institutions, improving teaching and learning, supporting institutional reform, promoting access and lifelong learning and supporting the development of fourth level education (Higher Education Authority, 2009). Science Foundation Ireland (SFI), also established in 2000, provides awards to support scientists

and engineers working in the fields of science and engineering that underpin biotechnology, information and communications technology and sustainable energy and energy-efficient technologies development (SFI, 2009). In this period the Irish Research Council for the Humanities and Social Sciences (IRCHSS) and the Irish Research Council for Science, Engineering and Technology (IRCSET) were also established.

The restructuring of graduate/PhD training is part of the initiative by Irish universities to realize government policy, which has given rise to the concept of 'Fourth Level Ireland'. The Higher Education Authority (HEA) is the statutory planning and policy development body for higher education and research in Ireland, and government funding for higher education is allocated through this body. The seven universities, fourteen institutes of technology and a further seven designated institutions all operate under its aegis. In turn, library budgets are assigned from each institution's allocation, but it is neither mandatory nor usual for research grants and awards won competitively to be "top sliced" to enhance library allocation to provide research support. The numbers engaged in research in Ireland's higher education environment are rising steadily, with 4,539 full-time and 617 part-time students enrolled on full-time PhD programmes in 2006/2007.(HEA,2009). Unfortunately HEA statistics do not differentiate between the postgraduate taught Masters and research Masters populations, the total of which in 2006/2007 was 7922 full time and 4216 part-time.

However, an examination of the research infrastructure in Ireland, undertaken on behalf of the HEA by international experts in 2006/2007, noted that library provision as a whole is an undergraduate resource, which does not meet the needs of the postgraduate research student behaviour and expectations (HEA/FORFAS, 2007). Given the recent deterioration in the Irish national economy, it is presumed that historic under-investment in this component of the research infrastructure will not be redressed in the foreseeable future. Thus, the ability to meet the needs and expectations of Ireland's research community is a challenge for all academic libraries in Ireland, some of which are facing budget cuts of double figures in the current financial year. This paper attempts to explore how resource sharing might provide opportunities for the consolidation of strengths and minimize weaknesses, whilst at the same time serving the research community.

Of course resource sharing is not a new phenomenon, and it is perhaps fitting to note that the earliest example of Irish writing, a sixth century manuscript of the Psalter, *An Cathach*, is ascribed to St. Columba as a copy of a psalter lent to him by St. Finnian. A millennium and a half later it is well recognized that no library can meet all the material requirements of their readers, especially the more esoteric needs of those engaged in research. Resource sharing initiatives such as reciprocal access arrangements, interlibrary loan and document delivery services have traditionally served to meet these requirements. Recently, however, there has been some resurgence in interest in the concept and focus of resource sharing (Jackson, 2005; Williams, 2008; Bennett, 2007; Clark and Bailey-Hainer, 2007; Oberlander, 2007; Dunsire, 2007 to name but some), and while unsurprising, it is nevertheless interesting to note, that much of the impetus for this new interest and discussion is drawn from interlibrary loan services and experiences, and driven mainly, but not exclusively, by the need to reconfigure interlibrary loan services to meet users' current needs and expectations. Although interlibrary loan services are

an integral and vital part of the knowledge chain, the focus of this paper will be the challenges of resource sharing in a broader sense.

The last study focusing specifically on resource sharing in Ireland was commissioned by The Committee on Library Co-operation in Ireland (COLICO), and was reported in September 1996 (White, 1996). Historically, the timing of that research is of interest, as it focuses on the infrastructure of resource sharing in Ireland before the ubiquitous use of the internet, and before the ease of access and availability of resources in electronic format. The report suggested that among general academic and public libraries in Ireland, only Trinity College Dublin (TCD), and Queen's University Belfast (QUB), had collections that could be regarded as major, with the remainder operating an access rather than holdings policy (White, 1996). In this assessment, it should also be remembered that for historic reasons TCD is a beneficiary of UK legal deposit, and QUB is a member of the UK higher education polity.

Similarly, the seminal study of Irish libraries undertaken by An Chomhairle Leabharlanna in 1997/1999 and published as *Joining Forces: Delivering Libraries and information Services in the Information Age* (1999), mapped the Irish information landscape at that time, and made recommendations for future development. Included in these recommendations was the establishment of a National Coordinating body for all libraries and information services in Ireland, with concomitant investment, the ultimate aim of which was to develop a pan Irish public access network making available free of charge within all libraries, agreed core content, including electronic government and public service information, websites for libraries with links to their catalogues, and digitized cultural and heritage materials. Unfortunately, this strategic plan was not matched by sufficient resources to develop and implement an operational plan to achieve its recommendations. However, the change in the information environment, which has resulted in a change in information behaviour and user expectations since the publication of these reports cannot be overstated. Powell's definition of the information environment in the context of higher education in the United Kingdom as "an integrated set of networked services that allow the end-user to discover, access, use and publish digital and physical resources as part of their learning and research activities" can equally be applied to Ireland (Powell, 2006). This is the context for this paper, which will discuss current resource sharing activity to support research needs, from the practical to the strategic, and will also identify areas where it would seem some more development is required.

While the national coordinating body for all libraries and information services recommended by *Joining Forces* has not been realized, nevertheless, there is an established library co-operative infrastructure in Ireland. Established in 1977, COLICO is a North-South body whose function is to optimize the collective value of the combined resources of Irish libraries, through the co-ordination of co-operative activities, the development of policy and the formulation of proposals for action. It acts as an advisory committee to An Chomhairle Leabharlanna and the Library Information Services Council (LISC) of Northern Ireland. Most libraries are familiar with COLICO through their annual collection of interlibrary loan statistics, which are published in its annual report (COLICO, 2009). Although resource sharing is not explicit in the aims of the Consortium of National and University Libraries (CONUL), it is implicit as the consortium acts as the main co-ordinating body for the university libraries, the National Library of Ireland, Dublin Institute of Technology, royal College of Surgeons in Ireland and the Royal Irish Academy. It currently has committees and groups focusing on Copyright and Regulatory

matters; Preservation; Information Literacy; Co-operative Collection Development; Collaborative Storage; Legal Deposit and the Irish Theses Database (CONUL, 2009). The CONUL Research Support Survey (Cox, 2005) was the first such survey in Ireland, and provides a valuable insight into the habits, expectations and satisfaction levels of researchers in Irish higher education.

CURRENT RESOURCE SHARING INITIATIVES - IReL

Without doubt, the star in the firmament of Irish academic libraries' resource sharing is the Irish Research Electronic Library (IReL). With increased government investment in research in the past decade, it was also recognized that for Irish researchers to compete internationally, and to attract international researchers to Ireland, an information infrastructure to international standards was essential (Dunne, 2008). As inter-institutional collaboration became a requirement for the granting of research funds, the variation in information resources among the universities became more obvious to the research community (Dunne, 2008). Pressure exerted on the funding bodies by the research communities coalesced with the suggestion by the Irish Universities Association (IUA) Librarians to develop a shared electronic journal collection, which ultimately gave rise to IReL. Initiated in 2004, Science Foundation Ireland (SFI) and the Higher Education Authority (HEA) jointly provided funding to provide licensed access to electronic journals and some databases in the information and communications technology (ICT) and biomedical fields for an initial five year period, 2004-2008. In 2006, through HEA funding, the service was extended to include the Humanities and Social Sciences, and through a consortial approach IReL now delivers desk top access to 6,000 titles in Science and Technology, and 18,000 titles in Humanities and Social Sciences – more than 40 million articles in full text to researchers in all seven universities, with access to an additional 42,000 electronic books (IReL, 2007). IRIS, a company established in 1992 as part of a resource sharing initiative among the university libraries, co-ordinates and administers the IReL service, and the grants are made direct to it by the funding bodies (McGoldrick, 2005). Additional to the obvious saving on subscription rates are the benefits of central negotiation and administration. Bainton (2008) makes the point that “the ease with which e-resources can be consulted by students is not matched by convenience in resource management”, and also notes that compared with printed material, e-resources are more expensive to acquire.

IReL has been the most significant factor in Irish academic library development in the past decade. It has enabled the transition from the position observed by White in 1996 where only one institution in the Republic of Ireland had a collection of any significance, to a more “level playing-field” (Dunne, 2008), where all of the university libraries have a collection of international standing. In fact in the IReL Impact Survey of March 2007 a respondent noted that IReL “is the only place where our research infrastructure across the board is of international standards” (IReL, 2007). Access to such a wide range of resources electronically has been instrumental in changing the information behaviour of the researcher, with desktop access becoming the expectation rather than the exception, thus diminishing the necessity to visit the library in person. The impact on document delivery services is one of diminishing volume and concurs with patterns reported in the literature (Kidd, 2003).

However, there is little room for complacency. While the initial period for IReL (Phase 1, supporting science, technology and medicine) was for the period 2002-2008, it has been extended to run until the end of 2009, and its renewal date will then coincide with that of Phase II (Arts and Humanities). Although the IReL Impact Survey (2007) reported a strong majority view (86%) that IReL is a necessity not a luxury, and that any discontinuation of IReL would be viewed very negatively; in the current economic climate it is not unreasonable to presume that renewal of licence subscriptions will be scrutinized and may well be dependent on usage statistics. Because of the “maintained spend” model agreed in the negotiation for Phase 1, some institutions find they are locked into individual subscriptions, and so may not be able to cancel the individual subscription for the duration of the IReL subscription period. In a climate of stringent budget cuts, this lack of autonomy over subscription commitments could cause some tension, as may the fact that some libraries are paying the lion’s share of the commitment. The lack of stability in the pricing models of electronic resources is also a cause for concern, as Irish university libraries evidenced recently in a projected increase of 75% for the next two year subscription period for a “big deal”, now considered an essential suite of resources.

PRINT MATERIALS

Such exorbitant price increases in electronic resources are possible because they are subject to monopoly supply, but the average increase in journal subscription rates in the UK for all subjects in the five year period 2001-2006 was still substantial at 51% (Bainton, 2008). In addition the complexities of their acquisition and the financial commitment required for multi-year subscriptions together with volatile currency fluctuations, means that an ever increasing proportion of an often decreasing acquisitions budget is inaccessible. This is usually to the detriment of book acquisition, which too is subject to price increases higher than the rate of inflation (Bainton, 2008). Where budgets for book acquisition survive, preference is granted to the support of undergraduate requirements, with reading lists submitted by academic staff the primary selection tool. In this respect no improvement on the position observed by White in 1996 is evident, as book stock to support research is underfunded and collections underdeveloped. This view is corroborated by the findings of the Research Information Network (RIN) report, *Researchers’ Use of Academic Libraries and their Services* (2007), in which it is argued that teaching may suffer from libraries’ tight rules on purchasing research texts as teaching degree level courses is impossible without buying “decent research texts”. In the period since the COLICO survey (1996) the transition to electronic resources has been given primacy by all academic libraries, in spite of the fact that monograph publication output is also increasing, and it has been estimated that in 2020 the total UK monograph output of titles will be 50% greater than in 2003, with about 20% remaining in print format only in 2020 (Brazier, 2005). It must also be noted that the monograph is still the principal avenue for research output in the Humanities, and that the sustained under resourcing of this component of acquisition budgets will result in disciplinary deprivation. The CONUL Research Support Survey (Cox, 2005) also indicated Arts was the only discipline to register majority disagreement (68.6%) that online information reduced the importance of physical collections for research, although its researchers increasingly use e-resources.

However, common development collection policies are less usual here and in the UK than in the United States, and ironically insufficient funding levels can be ascribed as one of the possible

causes for this. While such policies will ultimately be for the benefit of all, the allocation of funding to sustain agreed initiatives or collections in the longer term may place undue pressure on an already tight budget and they also carry some degree of risk. The transient nature of some research funding is also a factor which must be taken into consideration in collection development policies (Cox, 2003). The centralised model for interlibrary loan services in the UK and Ireland also diminishes the civic responsibility for resource sharing and common development collection policies unlike in areas where a more distributed model of interlibrary loan exists (Patterson, 2008). Nonetheless to reach any consensus to the adoption of a collaborative approach to development collection requires a considerable amount of research and preparatory work. Reporting in 2004, the CONUL/ALCID Committee on Co-operative Collection Management presented a preliminary attempt to identify cooperative opportunities for collection management, consisting of a statistical overview of the resources held by the member libraries, and also recommended the customisation of a collection level description schema to map the landscape (CONUL, 2004). The scale of such a project is recognised in the report's caveats that approximations and compromises were made during the data gathering process, and also that issues relating to the definition of material and the measurement of multiple formats emerged. Also data such as detailed subject breakdown, collections characteristics, uniqueness or overlap were not included as little qualitative data was readily available or could be captured in the available time (CONUL, 2004). Unfortunately, there is no evidence to hand, that this preliminary work has been extended to a more in-depth study. However it is also interesting to note that in the UK's Research Support Libraries Programme's (RSLP's) study on barriers to resource sharing among Higher Education libraries, it was concluded that "no strong and convincing case for it has been made to the HEIs", and it recommended that studies be undertaken to demonstrate the benefits, not only to directors of library services, but to university management (RSLP, 2002). The RSLP report also notes that while the potential advantages of deep resource sharing are considered marginal relative to mainstream library provision, and that most librarians and institutions opt for incremental change where specific advantages are to be gained, these are generally instigated on a voluntary basis, where there is little or no risk and from the bottom up (RSLP, 2002). Such an approach lacks strategic direction and the strength to influence policy decisions or funding bodies.

RESOURCE DISCOVERY

Online access to library catalogues has become the norm, and the benefits to researchers are obvious, as remote access to library catalogues allows for more effective use of library resources. Ensuring that research collections are included in online catalogues provides increased visibility, awareness and accessibility of library collections; increased use; enhancements to quality of records and enhanced collaboration between libraries (RIN, 2007). The findings of the CONUL survey (Cox, 2005) indicate that just over half of the respondents visited other libraries for research purposes, but that this figure rose to 84.2% in the Arts and Humanities, thus confirming the maxim that the library is the laboratory of the Humanities. The benefits of union catalogues as resource discovery tools are well demonstrated through the universal use of COPAC and WorldCat. It is regrettable that the Irish libraries have to date failed to develop

either a national union or virtual union catalogue, and while it remains a “central desideratum” (McGoldrick, 2005), an injection of resources will be required to resurrect the concept, as IRIS, the body established charged with its development is now focused on the administration of the successful IReL project, outlined above. The background to IRIS is well documented (Kelly and Alton 1994, Peare, 1995, McGoldrick, 2005), and although one of its initial aims was to alleviate the reliance of interlibrary loan provision on the British Library Document Supply Centre, its infrastructure was not sufficiently robust, nor indeed were the library collections in Ireland of sufficient strength to meet the need, as observed by White (1996). Nevertheless the abandonment of the development of a national virtual union catalogue has resulted in a possible underutilisation of material held within the country, as the ability to operate a single search across multiple catalogues is not available. Such a facility would also enhance the preparation for research visits to other libraries. RASCAL (Research And Special Collections Available Locally) was originally developed as an electronic portal to research and special collections in Northern Ireland. In 2008 under the aegis of COLICO, it was expanded to be inclusive of collections throughout Ireland. This portal maps collections not only in libraries, but also those in museums and archives. PADDI (Planning Architecture Design Database Ireland) is produced in collaboration by the Architecture and Planning Libraries of Queen's University Belfast and University College Dublin, and is a bibliographic database providing access to information on all aspects of the built environment and environmental planning in Ireland.

RECIPROCAL ACCESS

Just over half (52.5%) of the respondents to the CONUL Survey (Cox, 2005) visited other libraries for research. However, a divergence in usage patterns was noted between researchers from institutions in the greater Dublin area and those outside, where the level of use registered 45%. This is quite close to the 47% of UK researchers who make use of other libraries, reported in the findings of the RIN survey (2007). Discipline was also a significant variant, with a range from 25.4% for Computer Science to 84.2% in the Humanities, with others in a narrower range of 42-61%. The RIN survey (2007) also reported the variation across disciplines, noting too that Humanities students are the most common users of other institutions' libraries, but quoting a figure of just 38% for 2006. Ease of reciprocal access, reading and borrowing arrangements, especially within a specific locality or region were viewed as desirable (RIN, 2007). In Ireland the ALCID scheme utilises a common membership card to allow access, but not borrowing to the collections of each of the participating libraries to academic staff and postgraduate students. Borrowing for academic staff and research students is facilitated through SCONUL ACCESS, and six of the seven university libraries are members. Trinity College Dublin, the largest university library in Ireland, is not, because as a UK Legal Deposit Library it needs to conserve and protect its collections, and as a city centre library with good collections, it is under pressure for access by external readers (Peare, 2009). Patchy awareness of the SCONUL scheme was reported by RIN (2007). Similarly, the CONUL survey (Cox, 2005) revealed that just over a quarter of respondents had ALCID cards, with over half unaware of the scheme, (rising to three

quarters outside Dublin), and with the greatest ownership among the Humanities students. The uptake of the SCONUL borrowing scheme, then known as SCONUL RESEARCH EXTRA was reported as miniscule in the CONUL survey (Cox, 2005) with over 80% of respondents unaware of the scheme, but it must be remembered that the scheme was only introduced in 2003, and its promotion may have been inadequate. It must also be conceded that the current lack of interoperability among the various library management systems, necessitating local arrangements to facilitate borrowing, could be perceived as an impediment to seamless resource sharing criteria. It is possible that recently formed regional higher education alliances, such as the Dublin Regional Higher Education Alliance (DRHEA) will place pressure on libraries of the participating institutions to remove remaining barriers of access and services.

DIGITIZATION

Digitization is not only a means of preservation, but also facilitates greater accessibility of material to a wider audience, and since 2000 there is a growing number of projects funded by HEA PRTLTI, many of which will make primary sources available to a wider scholarly community. Many of these projects have been established under the auspices of newly established research centres, and while academic libraries are not necessarily the lead partner in such projects, there is usually significant collaboration and involvement. Two such examples are Trinity College's Long Room Hub, which has been jointly funded by HEA-PRTLTI and philanthropic sources, and also the Irish Virtual Research Library and Archive (IVRLA), which draws on a number of sources from across UCD including the library. Established under the auspices of the Royal Irish Academy, the Digital Humanities Observatory's mission is to manage and coordinate the electronic resources in the humanities, and to enable research and researchers in Ireland to keep abreast of national developments in the creation, use and preservation of digital resources (DHO, 2009).

RESEARCH OUTPUT

The ultimate component of the "integrated networked services" which constitute Powell's definition of the information environment in the context of higher education relates to research output, and its publication in digital and / or physical format. In the past, research was generally reported in various forms of the published literature, but the digital age has presented new opportunities as research findings in digital form can be easily moved, duplicated, manipulated, re-used, merged and stored digitally (RIN, 2008). Bainton (2008) suggests that these digital banks of the publications produced by an institution's authors will soon be as indispensable as an institution's website. Established in 2007 as a three year project funded by the HEA's Strategic Innovation Fund, matched by institutional funding, IReL-Open has facilitated the establishment of institutional repositories in each of the seven universities. Its mission is to provide open access to institutional research output, including datasets. The content of each of the repositories will be harvested and linked via a National Research Portal, thus making Irish research output freely available to a wider audience, while also raising the research profile, which in coalesces with the national research agenda (IReL Open, 2009). This portal will also ensure the long-term preservation and curation of research output, including data-sets associated with research. Challenges facing institutional repository development include open access mandates and

policies, and, as in any collaborative programme, the resolution of local metadata practices with the standard, Dublin core.

Theses are an integral part of the universities' research output, and to date the majority are held in Irish libraries in physical format only. This obvious barrier to access results in the under utilisation of the material. The CONUL Irish Thesis Database Working Group, reporting in 2002, explored the feasibility of developing an electronic thesis database for Ireland, and recommended the establishment of a task force to consider in depth the full implications of an ETD initiative for Ireland. There is no documentation of further development, but the population of the institutional repositories with electronic theses on a voluntary submission basis has begun. As electronic thesis submission is a requirement of University College Dublin's new "structured" PhD programme, it is essential the infrastructure is in place before the first cohort submits in 2009/2010. Retrospective digitization also requires urgent attention, and it is possible that collaboration with EthOS could be advantageous, as this service could facilitate harvesting back into the institutional repository. Another challenge to the progress in their development is the fact that managing the population of repositories is proving more labour intensive than first anticipated (Bainton 2008).

INFORMATION LITERACY

Ireland's "Fourth Level" and structured PhD programme is compatible with the European Universities Association's (EUA's) Salzburg principles (EUA, 2006). It recognises that while the core of the research degree is a programme of research culminating in the submission of a thesis, inherent in the structure is the acquisition of generic or transferable skills. In 2007 a HEA sponsored inter-institutional pilot project on the development of generic skills for research students was launched, containing an information literacy module developed by library staff of the pilot institutions, National University of Ireland Galway, Trinity College Dublin and University College Cork (SIF, 2007). An Information Skills Community of Practice (ISCOP) has also been established, which provides a forum for exchange of experience and also the sharing of learning resources. This site is hosted by the National Digital Learning Repository (NDLR) which is an online resource bank to support collaboration and sharing of teaching and learning resources within the Irish Higher Education sector, and is another HEA funded pilot project.

CONTINUING PROFESSIONAL DEVELOPMENT

In times of economic constraint, continuing development programmes such as attendance at courses, seminars and conferences can come under pressure, and some innovative thought may be necessary to ensure a vacuum is not created. Established in 1995, the Academic and National Library Training Co-operative (ANLTC), whose membership is the National Library of Ireland and all the university libraries throughout all of Ireland, runs seminars and courses for all levels of library staff. It also administers annually two bursaries for continuing professional development – one each for paraprofessional and professionally qualified staff. Each of the universities take it in turn to host the annual Irish National and University Library Staff (INULS)

conference hosted by each of the universities in turn, and the Irish Universities Information Services Colloquium (IUISC)¹ is also held annually and brings together senior staff from Libraries, ICT Systems and Services, Learning Technology and Audio Visual Services working in Higher Education in Ireland. LIR HEAnet User group for Libraries² provides a forum for discussion on the use of electronic resources and networks and their development by HEAnet libraries. Irish library staff also contributes to and participates in conferences and seminars internationally.

CONCLUSION

In common with other social sciences, the gap between research and practice is a preoccupation in the field of library and information science (Booth, 2003) and it has been suggested that practitioners do not make enough use of research to improve services or practice (Cullen, 1999). However, it has also been suggested that the greatest obstacle to finding library research is that librarians do not publish their research (Crumley, 2002). As financial constraints impact on all publicly funded organisations it is not unreasonable to suggest that decision making will become more dependent on research evidence than has previously been the case. Economies of scale cannot justify the development of a research body such as the Research Information Network (RIN) in the UK, and while its output is relevant to higher education in Ireland, it is important to remember that its findings must be adapted and scaled to the Irish environment, and that partnerships and collaboration may result in different dynamics than in a larger polity. It is therefore important that Irish research is documented and published, so that it helps map the information landscape which supports the research agenda and the national interest.

REFERENCES

- Bainton, T. (2008) "The support of teaching by libraries in higher education: towards an analysis of past and future costs". http://www.sconul.ac.uk/publications/pubs/support_of_teaching.pdf (accessed 19/1/2009).
- Bennett, M. J. (2007) "OPAC design enhancements and their effects on circulation and resource sharing within the library consortium environment" *Information Technology and Libraries*, Vol. 26 No. 1, pp. 36-46.
- Booth, A. (2003) "Bridging the research –practice gap? The role of evidence based librarianship". *New Review of Information and Library Research*, Vol. 9 No 1, pp. 3-23

¹ <http://www.iuisc.ie/2009/about.html> (accessed 13/1/2009)

² <http://lirgroup.heanet.ie/> (accessed 13/1/2009)

Brazier, C. and Clayphan R. (2005) "Bibliographic control for twenty-first-century collection management and resource discovery: current approaches in the British Library". *Alexandria*, Vol. 17 No 2, pp 69-79.

Clark, H. and Bailey-Hainer, B. (2007) "Librarians, Throw off your policies and expose your holdings" *Action for Libraries*, Vol. 33 No 2, pp. 1, 7
<http://www.bcr.org/publications/afl/2007/spring07/spring2007.pdf> (accessed 19/1/2009).

CONUL (2002) *Report of the CONUL Irish Thesis Database Working Group*.
<http://www.conul.ie/committees/theses.shtml> (accessed 20/1/2009)

CONUL (2004) *Towards a Joint Inventory of Collections in CONUL/ALCID Libraries*.
<http://www.conul.ie/committees/documents/Cooperative%20Oct2004.pdf> (accessed 20/1/2009)

Cox, J. (2003) "Establishing a collection management policy in a hybrid library context." *Sconul Newsletter*, Vol. 30, pp. 26-30.

Cox, J. (2005) *CONUL Research Support Survey, April-May 2005: report and analysis of national data*. http://www.conul.ie/committees/national_research_survey.shtml (accessed 19/1/2009)

Crumley, E. and Koufogiannakis, D. (2002) "Developing evidence-based librarianship: practical steps for implementation". *Health Information and Libraries Journal*, Vol. 19, pp.61-70.

Cullen, R. (1998) "Does performance measurement improve organizational effectiveness? A post-modern analysis" in *Proceedings of the Second Northumbria International Conference on Performance Measurement in Libraries and Information Services*. Newcastle upon Tyne: Information North, pp. 3-20.

Dunne, S. (2008) "The Irish research electronic library initiative: levelling the playing-field?" *Library Management*, Vol. 29 No8/9, pp.757-769.

Dunsire, G. (2007) "Landscaping the future for collaborative collection management". *World Library and Information Congress : 73rd IFLA General Conference and Council*.
<http://www.ifla.org/IV/ifla73/papers/125-Dunsire-en.pdf> (accessed 19/1/2009)

European Universities' Association (EUA) (2006) *Review of Professional Doctorates: National Qualifications Authority of Ireland*.
http://www.eua.be/eua/jsp/en/upload/Review%20of%20Professional%20Doctorates_Ireland2006.1164040107604.pdf (accessed 20/1/2009)

Higher Education Authority (HEA)/Forfas (2007) *Research Infrastructure in Ireland – Building for Tomorrow*. Dublin: HEA/Forfas.
http://www.forfas.ie/media/forfas061221_research_infrastructure.pdf (accessed 20/1/2009)

Higher Education Authority (2009) *Programme for Research in Third-Level Institutions (PRTLII)*
<http://www.hei.ie/en/prtlii> (accessed 20/1/2009)

Higher Education Authority (2009) Postgraduate enrolments <http://www.hea.ie/en/node/290> (accessed 20/1/2009)

IReL (2007) *IReL Impact Survey: Report and Analysis*. Dublin: IreL. http://www.irelibrary.ie/docs/IReL_Survey_Report.pdf (accessed 20/1/2009).

Irish Universities' Association (2007) *Fourth Level Ireland*. <http://www.iua.ie/publications/documents/publications/2007/4thLevelIreland.pdf> (accessed 14/12/2009)

Jackson, M. (2005) "Re-examining the future of resource sharing". *Interlending and Document Supply*, Vol. 33 No 4, pp. 212-213.

Joining Forces: Delivering Libraries and Information Services in the Information Age (1999) Dublin : An Chomhairle Leabharlanna.

Kelly, A. and Alton, B. (1994) "IRIS: a Z39.50 based service for database searching and document ordering". *Journal of Information Networking*, Vol. 2, No 3, pp. 187-213.

Kidd, T. (2003) "Does electronic journal access affect document delivery requests? Some data from Glasgow University Library." *Interlending and Document Supply*, Vol. 31, No. 4, pp. 264-269

McGoldrick, F. (2005) "IRIS: a resource-sharing initiative in Ireland". *Interlending and Document Supply*, Vol. 33 No. 4, pp. 208-211.

Oberlander, C. (2007) "Transforming the document delivery and resource sharing engine". *IFLA Journal*, Vol. 33 No. 1, pp. 32-40.

Patterson, A. (2008) "Linchpin or weakest link? Challenges to current document delivery practice and services". *Interlending and Document Supply*, Vol. 36, No, 4, pp.191-195.

Peare, J.D.T. (2009) personal communication (20/1/2009)

Peare, J.D.T. (1995) "IRIS – a Z39.50 national information system". *New Review of Information Networking*, Vol. 1, pp. 17-32

Powell, A. (2006) *JISC Information Environment Architecture*. <http://www.ukoln.ac.uk/distributed-systems/jisc-ie/arch/> (accessed 19/1/2009)

Researchers Information Network (2007) *Researchers' Use of Academic Libraries and their Services*, <http://www.rin.ac.uk/files/libraries-report-2007.pdf> (accessed 20/1/2009)

Researchers Information Network (2008) *To Share or not to Share: Publication and ~quality Assurance of Research Data Outputs*. <http://www.rin.ac.uk/files/Data%20publication%20report,%20main%20-%20final.pdf> (accessed 20/1/2009)

Research Support Libraries' Programme (RSLP) (2002) *Barriers to Resource Sharing Among Higher Education Libraries*. <http://www.rslp.ac.uk/circs/2002/barriers.htm> (accessed 20/1/2009)

Science Foundation Ireland (2009)

http://www.sfi.ie/content/content.asp?section_id=174&language_id=1 (accessed 20/1/2009)

Strategic Innovation Fund (SIF) (2007) *SIF Information Literacy Module* .

<http://www.tcd.ie/Library/SIFInformationLiteracyProject.pdf> (accessed 20/1/2009)

White, B. (1996) *Resource Sharing in Irish Libraries: report to The Committee on Library Co-operation in Ireland*. [s.l.]: COLICO.

Williams, Karen Carter (2008) "Consortial and reciprocal agreements in academic libraries: a survey of common practices". *Journal of Interlibrary Loan, Document Delivery and Electronic Reserve*, Vol. 18 No. 2, pp. 265-275.

WEBSITES

ANLTC (Academic and National Library Training Cooperative) <http://www.anltc.ie/> (accessed 20/1/2009)

COLICO (Committee on Library Cooperation in Ireland) <http://www.librarycouncil.ie/colico/> (accessed 20/1/2009)

CONUL (Consortium of National and University Libraries) <http://www.conul.ie/> (accessed 20/1/2009)

DHO (Digital Humanities Observatory) <http://www.digitalhumanities.ie/node/69> (accessed 20/1/2009)

DRHEA (Dublin Regional Higher Education Alliance)
<http://www.ndp.ie/viewdoc.asp?DocID=2080> (accessed 20/1/2009)

EthOS (Electronic Theses Online System) <http://www.ethos.ac.uk/> (accessed 20/1/2009)

HEA (Higher Education Authority) <http://www.heai.ie/en/AboutHEA> (accessed 20/1/2009)

IRCHSS (Irish Research Council for the Humanities and Social Sciences) <http://www.irchss.ie/> (accessed 20/1/2009)

IRCSET (Irish Research Council for Science, Engineering and Technology) <http://www.ircset.ie/> (accessed 20/1/2009)

IReL Open <http://www.irel-open.ie/> (accessed 20/1/2009)

IUISC (Irish Universities Information Services Colloquium) <http://www.iuisc.ie/> (accessed 20/1/2009)

IVRLA (Irish Virtual Research Library and Archive) <http://www.ucd.ie/ivrla/> (accessed 20/1/2009)

LIR HEAnet User Group for Libraries <http://lirgroup.heanet.ie/> (accessed 20/1/2009)

Long Room Hub <http://www.tcd.ie/longroomhub/> (accessed 20/1/2009)

NDLR (National Digital Learning Repository) <http://www.ndlr.ie/> (accessed 20/1/2009)

PADDI (Planning Architecture Design Database Ireland) <http://www.paddi.net/> (accessed 20/1/2009)

PRTLTI (Programme for Research in Third-Level Institutions) <http://www.hea.ie/en/prtli> (accessed 20/1/2009)

RASCAL (Research and Special Collections Available Locally) <http://www.rascal.ac.uk/> (accessed 20/1/2009)

SFI (Science Foundation Ireland)
http://www.sfi.ie/content/content.asp?section_id=174&language_id=1 (accessed 20/1/2009)

SIF (Strategic Innovation Fund) <http://www.hea.ie/en/sif> (accessed 20/1/2009)

