

Library Support for Research in a University Context

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Abstract

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An increased focus on research within Australian universities, driven by the federal government's research agenda, has heightened interest in the services and resources provided by academic libraries to enhance research within higher education institutions. While academic libraries have always had as part of their mission support for research within the university, what constitutes this support has changed over time.

This paper looks at library support for research in the university environment over the past 10-15 years. In evaluating the changing functions of this support for research, examples from Australian university library websites are used to identify current activities. Questions are raised as to whether these activities reflect the evolving functions of traditional libraries or whether fundamental new innovative roles are emerging.

Times of change lead to changes in organizational structures and at Curtin University of Technology Library and Information Service (LIS) the Research Services Unit was established in 2005 to drive library support for research within the university.

The purpose of the Research Services Unit is to:

Proactively support the growth and development of research activities at Curtin University by providing high quality resources, supporting research processes, facilitating scholarly communication and promoting research output.

The paper will discuss the main functions of this new unit and how its introduction has strengthened the partnership between the LIS and the academic community. Plans to further this role in support of research are also considered in the context of a higher education landscape where research is becoming a collaborative global activity enabled by the Internet.

Keywords: Research Support; Academic Libraries.

1 Introduction

The Australian Government through its program 'Backing Australia's Ability' plans to invest \$8.3 billion over a ten year period from 2001-02 – 2010-11 to pursue excellence in research, science and technology. [1]

One of the initiatives already implemented is the Systemic Infrastructure Initiative. (SII) This initiative recognizes that

infrastructure is essential for high quality research and includes facilities such as libraries. [2]

Funding was approved for SII projects from 2002 to 2006 and among the successful bids were a number of projects impacting directly on libraries including:

- access to the ISI Web of Science Backfiles and JSTOR;
- an expansion of the Australian Digital Theses (ADT) Program;
- Meta Access Management System (MAMS);
- Australian Research Repositories Online to the World (ARROW);
- Towards an Australian Partnership for Sustainable Repositories (APSR);
- Regional Universities Building Research Infrastructure Collaboratively (RUBRIC);
- Middleware Action Plan and Strategy (MAPS).

Collectively ADT, MAMS, ARROW and APSR are known as the Federated Repositories of Online Digital Objects (FRODO) Projects while RUBRIC and MAPS are part of the Managed Environment for Research Repository Infrastructure (MERRI) Projects. More details about these projects are available on the Australian Government Department of Education, Science and Training (DEST) website. [3]

In 2004 the second phase of Backing Australia's Ability called 'Building our Future through Science and Innovation' was announced. Included in this second phase was an initiative to develop a quality framework for research in publicly funded institutions called the Research Quality Framework (RQF).

The RQF aims to measure the quality of research in universities and publicly funded research institutions. It also aims to demonstrate the impact and use of this research and address issues of accountability for research using public funds. It builds on activities that are happening internationally where countries are linking funding to research performance. The preferred model for the RQF uses expert assessment panels to measure the quality and impact of research conducted in universities. [4]

Although the RQF has not yet been accepted in Australia a trial of the anticipated model was held in 2005 by the Australian Technology Network (ATN) made up of the Australian Universities of Technology. [5] Curtin University of Technology as a member of the ATN participated in the trial. Researchers in the trial were required to provide citations from their research for the trial and Library staff provided extensive support to these academic staff. This has

lead to increased interest in bibliometrics and library staff from the Research Services Unit have developed expertise in this area and provided workshops and individual training to support academic staff develop their evidence portfolios.

Based on the trial held in 2005, library staff in universities in Australia can expect to have an important role in working with researchers on the RQF if it is adopted by Government.

Collectively these and many other government strategies are placing great emphasis on research in universities and university libraries have a role in these research developments.

2 Library support for research

The purpose of the academic library is outlined in its mission statement. In a paper at a previous IATUL conference Bundy looked at a range of university library mission statements and it is clear from the examples quoted in his paper that while the wording may be different, the key elements of the university library mission statement, in Australia and other countries, focus on providing information services and resources to enhance research, and teaching and learning. [6]

While the focus in learning and teaching has been on information literacy, support for research has been more diffuse. For this paper selected academic library websites were reviewed to identify how university libraries in Australia achieve their mission to enhance the research of their university.

There are 39 universities in Australia, and many are arranged into sub groupings that facilitate collaborative partnerships. The web sites of two groups, the five Libraries of the Australian Technology Network (LATN) [7] and the Group of Eight (GO8) [8] were reviewed. These two groups were selected because LATN is most closely aligned with IATUL and the GO8 represent the libraries of the traditional, long established research universities in Australia. The review of the thirteen websites revealed a surprisingly similar set of core services offered to the University research community.

These core services are outlined below.

Scholarly Resources

Traditionally library support for research has been most clearly identified by its collections. Fifteen years ago collections were still dominated by print books and journal titles. In the print only environment the size of the collection and the amount of funding provided in the book vote reflected the status and importance of libraries holding major research collections in Australian universities.

However the shift from print to electronic journals, databases and e-books has witnessed a major shift in the importance of collections as an indicator of support for research. The availability of electronic journal titles and significant backsets from publishers such as ScienceDirect and JSTOR has enabled all academic libraries to provide access to significant collections of scholarly resources outside what was possible in the print only environment. For example in 1990 my

library at Curtin University of Technology in Western Australia held 5139 journal titles and by 2004 this had risen to 35,492. By comparison the GO 8 library at The University of Western Australia (UWA) had 12011 titles in 1990 and 46,840 in 2004. While UWA still holds a larger collection of journal titles the gap has decreased from 1990 when Curtin held just 42% of the number of titles held by UWA to 2004 when Curtin held 75% of titles. (This comparison does not mean that the two institutions held exactly the same titles). [9] This example demonstrates the shift in collecting from print to electronic collections that now enables all academic libraries to respond to the research needs of their research community.

Building special collections is still an activity mainly undertaken in GO8 libraries, but digitization has enabled all academic libraries to build substantial special collections targeted at specialized research areas as required. At Curtin University of Technology for example, the John Curtin Prime Ministerial Library (JCPML) has created a significant digital special collection on the life and times of Australia's second world war prime minister John Curtin. [10]

Document Delivery

All Australian academic libraries offer a document delivery service as an adjunct to the building of collections and providing access to databases as reflected on the LATN and GO8 websites. The debate of the early 1990's was 'access versus ownership' when the expansion in the number of print journal titles being published plus spiraling price increases put pressure on even the GO 8 academic libraries. Document delivery became an alternative method of acquiring documents especially in specialized areas of research. As electronic methods of delivering documents developed and the waiting times shortened from six weeks to a couple of days demand for the service soared. Some of the surveyed libraries fully fund the acquisition of this material from their collection budgets while others subsidize or charge the full price for this service. It is clearly a service in support of research and in most institutions is only offered to academic staff and postgraduate students.

Online Reference Services for researchers

The provision of reference services to researchers has traditionally been an important role for the reference librarian. The shift to *e-services* has enabled academic libraries to develop a suite of research support services not possible in the print environment.

Services identified on the reviewed websites today include:

- Electronic current awareness alerting services to databases;
- RSS feeds to services such as new additions in the collection;
- Linking in the catalogue from citations to articles;
- Electronic reference services including online chat, SMS and email;
- Online recommendations to suggest new book titles;
- Table of contents (TOCs) from publishers' websites;

- Links to information of importance to researchers such as ethics, regulations, copyright and intellectual property;

Training

The demand for training both for postgraduate research students and academic staff has increased with so many new electronic services and resources available to support research. Training workshops include

- Information literacy for the researcher;
- Bibliographic management software;
- Referencing styles for academic publishing;
- Citation searching;
- Workshops in mastering research resources and services;

A project that is currently under development in the LATN group is the E-Grad School information literacy project. This project is part of a larger Australian Technology Network (ATN) project to develop a virtual e-Grad School. This online information literacy course will assist research students and staff to develop advanced information literacy skills. [11]

Support for Grants

Library staff have become active partners with academic staff in applying for research grants and have been successful in accessing funding for a range of activities including digitising research collections and providing finding aids to primary research material.

Library as Place

The increased use of electronic information by researchers has created the impression that researchers are virtual users of library services and resources and no longer view the library as a physical space. However the websites reviewed demonstrate that academic libraries still provide special spaces for researchers in the library building such as:

- Researchers' Centres;
- Postgraduate reading rooms;
- Private study rooms.

Research Consultations

Most of the libraries reviewed have some form of service based on the physical interaction between librarians and researchers. The models of service delivery vary but increasingly the interaction takes place in the faculty rather than in the library. These outreach services have often replaced the service at the reference desk with personalized services provided to researchers in the place where they work.

Research Output Services

A range of new services targeting the research output of the university are emerging to support researchers. Many of these research output services are initiated by and/or promoted by library staff who, in many cases have the technical skills and expertise to make research output available globally using the Internet. These services take libraries beyond providing access to published scholarly

information to becoming the publishers of the information. Examples include:

- Electronic theses;
- Institutional repositories of peer reviewed e-prints;
- E-press publishing of institutional journal titles;
- BLOGS & WIKIS;
- Repositories for grey literature.

Not all the websites offer all the above research output services. However new research practices will continue to push the development of services in this area as a result of the Government's research agenda in higher education. As yet it is unclear whether this will continue an evolutionary development in library service provision or be the beginning of a transformation to a new form of research support.

3 Research Services Unit at Curtin University of Technology

The impact of the Government agenda is being felt at the institutional level as well as nationally. At Curtin University Library the Research Services Unit was established at the beginning of 2005 to position the Library strategically to respond to the changes.

The purpose of the Research Services Unit is to:

Proactively support research activities by providing relevant resources, strengthening research processes, facilitating scholarly communication, and promoting research output. [12]

The Library's support for research is informed by the recently completed University Strategic Plan 2006 – 2008, and its Research Enabling Plan. The Library is yet to develop a formal Research Support Plan and its main activities are currently structured under Key Result Areas (KRAs) in the Library Strategic Plan. The following list of KRAs and selected activities provide some examples of the work undertaken in the Research Services Unit.

KRA 1 Scholarly Resources

- Facilitating mandatory submission of electronic theses;
- Development of an institutional repository for academic staff eprints available to search engines to increase awareness of researchers' work globally;
- An interface between the University's publications database PUB and the institutional repository espace@Curtin
- Collection management guided by a new Collection Development Policy;
- Development of an archival research collections policy;
- A virtual Curtin Authors collection subset in the Catalogue created to promote research published in books to complement the digital repository;
- A solution for 'grey' research output not captured by espace@Curtin is being investigated;
- End user document delivery for academic staff and postgraduate researchers trialled;

- Suitable journal backsets to support researchers purchased;

KRA 2 Scholarly Communication

- Shibboleth authentication for the E-Grad School information literacy module being established;
- EndNote training;
- Mastering Research Resources series of training on database searching;
- Training and support for researchers wishing to obtain citation information;

KRA 3 Scholarly Environment

- Postgraduate students reading room;
- Academic staff reading room;

KRA 4 Clients

- Building relationships across the University's research community with the Research and Development Committee, Office of Research & Development and the Graduate Studies Committee;
- Joint research applications with academics;
- Citation searching for researchers;
- Individual consultations with academic staff and postgraduate students located in the faculties;

KRA 5 Culture

- A wiki used as a communication and collaborative tool for the Research Services Team;
- Senior librarians offices located in the faculties to ensure maximum contact with researchers and postgraduate research students;

KRA 6 Finance & Resources

- Subsidised document delivery;
- Funding for backsets;

4 Future Library initiatives in support of research in Australian universities

The review of research resources and services offered by the LATN and GO 8 libraries show that libraries have moved seamlessly from collectors of published scholarly resources to publishers of e-prints and journals through repositories and e-presses. But does this mark a fundamental departure from the previous traditional role of the academic library or is it a natural progression of the library's role in support of researchers? Providing access to published scholarly resources has been a traditional role of the librarian and it could be argued that providing the technology to access research output is a naturally evolving role for academic libraries.

However changes in the research process that are emerging may lead to a major transformation in the way that academic libraries support research enabled by ICT. Alternatively academic libraries may risk becoming irrelevant as partners in the research process. This change is linked to the emergence

of new research practices referred to in Australia as e-Research.

The term 'e-Research' encapsulates research activities that use a spectrum of advanced ICT capabilities and embraces new research methodologies ...[13]

E-Research focuses on primary data not published scholarly information and the question is how libraries will support this new form of research.

Clifford Lynch, writing about research libraries in the US and UK has commented that the large-scale technological shifts leading to the transformation of scholarly practice may not be well matched to traditional research library services. [14]

Linda O'Brien in her article on E-research comments that:

Libraries have traditionally been central to the research endeavor, managing and preserving scholarly resources, increasingly in digital form, and making these resources accessible to the researcher, often through collaboration and partnerships with other libraries. ... [but] no longer is scholarly communication a final discrete publication that is to be managed, made accessible, and preserved. [15]

Lynch and O'Brien raise questions about how research libraries can effectively support research and scholarship in this changing environment.

In the Australian context the implications of e-research are not yet clear but several significant initiatives are currently emerging that will provide directions for the future.

The Backing Australia's Ability program is now in its second phase and will continue with a raft of initiatives until 2010-11. Two initiatives in particular may have an impact on the way that academic libraries in the future support research in their institutions.

The first strategy is an Australian e-Research Strategy and Implementation Framework.

The Framework is yet to be finalized and accepted by Government but progress reports to date indicate that it will be implemented over a five year period using advanced and innovative information and communications technologies to produce high quality research outcomes in a range of activities such as skills development in e-research and data management.[16] Academic libraries in Australia will need to be in a position to respond flexibly and innovatively to these latest directions. Library staff, including university librarians, will require new skills and understandings. There will need to be close collaboration between university libraries, offices of research and development and ICT units within institutions. Consideration must also be given to positioning academic libraries as areas of expertise in information management.

Another strategy is the National Collaborative Research Infrastructure Strategy (NCRIS) which aims to:

... bring greater strategic direction and coordination to national research infrastructure investments. \$542 million is available through to 2010/11 to provide researchers with access to major research facilities and the supporting

infrastructure and networks necessary to undertake world-class research. [17]

Section 16 focuses on the importance of ‘platforms of collaboration’ to enable researchers ‘to collect, share, analyse, store and retrieve information.’ [18]

Clearly there is a link between the e-research strategy and access to major infrastructure outlined in the NCRIS agenda.

Academic libraries must respond to these changes in higher education and develop an understanding of the emerging new processes of scholarly practice and not assume a continuation of research services based on traditional models of scholarly communication.

How academic libraries succeed in this brave new world is likely to be played out at the local, national and international level over the next five years.

Notes

- [1] <http://backingaus.innovation.gov.au/>
- [2] http://www.dest.gov.au/sectors/research_sector/programmes_funding/general_funding/research_infrastructure/systemic_infrastructure_initiative.htm
- [3] http://www.dest.gov.au/sectors/higher_education/programmes_funding/programme_categories/research_related_opportunities/systemic_infrastructure_initiative/sii_funded_projects.htm
- [4] For more information: www.dest.gov.au/resqual
- [5] <http://www.atn.edu.au/>
- [6] Alan Bundy, “Challenging Technolust : The Educational Responsibility of Librarians,” (1999) <http://iatul.org/conference/proceedings/vol09/papers/bundy.html>
- [7] <http://www.atn.edu.au/wgroups/library.htm>
- [8] <http://www.go8.edu.au/>
- [9] *AARL Australian Academic & Research Libraries*, Supplement, Library Statistics 1990, and CAUL Statistics 2004
- [10] <http://john.curtin.edu.au/>
- [11] <http://www.egradschool.edu.au/whategsaoffe/information.jsp>
- [12] <http://library.curtin.edu.au/corporate/index.html#mission>
- [13] http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/e_research_consult/
- [14] Clifford Lynch, “ Research Libraries Engage the Digital World: A US-UK Comparative Examination of Recent History and Future prospects,” *ARIADNE*, Issue 46, (2006)
- [15] Linda O’Brien, “E-Research: An Imperative for Strengthening Institutional Partnerships”, *EDUCAUSE*

Review, volume 40, no. 6, p. 3 (November/December 2005).

- [16] Cathrine Harboe-Ree, E-Research Coordinating Committee, Report to the Council of Australian University Librarians (CAUL), April 2006.
- [17] http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/ncris/
- [18] The NCRIS Roadmap, ‘*ibid*’, PDF, p.52 .