



Working in partnership with researchers to support their research lifecycle: a case study

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Meeting:

111 — The challenges and changing roles of the Science and Technology Libraries — Science and Technology Libraries Section

Abstract:

With the increasing usage of international ranking systems to measure performance, it is essential that research institutions have access to a wide range of tools to facilitate measurement and research evaluation. During 2010 all universities in Australia took part in the federal government's Excellence in Research for Australia (ERA) initiative which was designed to assess research quality within Australia's higher education institutions using multiple indicators. One of the major indicators was scholarly publications – with citation analysis being used as an evaluation tool. This paper will report on the important role The University of Queensland (UQ) Library played in ERA 2010 and how it has realigned its services to play an increasingly important role in supporting the University's research lifecycle that includes metrics, data management and e-publishing services.

Background

Numerous reports stress the need for libraries to respond to the changing landscapes and remain a vital and responsive organization within their institution (ACRL, 2010; RIN & RLUK, 2011; SURF, 2011). Libraries need to position themselves as important players while demonstrating their value to the organisation. Borgman (2010) states 'the role of libraries in research institutions is evolving from a focus on reader services to a focus on author services.' The University of Queensland Library aims to focus on author services whilst not losing sight of effective service delivery to all of its customers.

As in similar studies it is important that this case study is put in perspective. There are 39 universities in Australia. The University of Queensland is a member of the Group of Eight

(Go8) which is a coalition of leading Australian universities, intensive in research and comprehensive in general and professional education. The Go8¹ exists to:

- enhance the contribution of its member universities to the nation's social, economic, cultural and environmental well-being and prosperity
- extend the contribution of its member universities to the generation and preservation of the world's stock of knowledge
- strengthen Australia's capacity to engage in and benefit from global developments, respond to global and local challenges
- expand opportunities for Australian students, regardless of background, to participate in higher education of world class.

In three highly regarded international ranking systems (Shanghai Jiao Tong Academic Ranking of World Universities, Times Higher Education World University Rankings and QS World University Rankings) The University of Queensland ranks in the top 1% of universities in the world and wishes to strengthen this position, aiming to be ranked as one of the top two universities in Australia.

Excellence in Research for Australia (ERA)

On the national scene the Federal Government implemented the 2010 Excellence in Research for Australia (ERA) initiative which was designed to assess research quality within Australia's higher education institutions using a combination of indicators. One of the major indicators was scholarly publications –with citation analysis being used as a major evaluation tool for most STM publications. For other disciplines peer review was used as the method of evaluation. Other indicators included research income, patents and other esteem measures such as memberships to learned academies. Full details of the data required to be submitted is publically available in the ERA 2010 Submission Guidelines (2009).

The results were announced in early 2011 with each institution receiving an ERA rating for each discipline.

¹ <http://www.go8.edu.au/>

Table 1: ERA Rating Scale

Rating	Descriptor
5	The Unit of Evaluation profile is characterised by evidence of outstanding performance well above world standard presented by the suite of indicators used for evaluation.
4	The Unit of Evaluation profile is characterised by evidence of performance above world standard presented by the suite of indicators used for evaluation.
3	The Unit of Evaluation profile is characterised by evidence of average performance at world standard presented by the suite of indicators used for evaluation.
2	The Unit of Evaluation profile is characterised by evidence of performance below world standard presented by the suite of indicators used for evaluation.
1	The Unit of Evaluation profile is characterised by evidence of performance well below world standard presented by the suite of indicators used for evaluation.
NA	Not assessed due to low volume. The number of research outputs does not meet the volume threshold standard for evaluation in ERA.

The results of ERA program confirmed that The University of Queensland is one of the nation's top two universities, undertaking research that is above world average in more broad fields than any other Australian university.

Given the importance of research publications the UQ Library played a major role in the ERA Program by utilizing its repository UQeSpace as the authoritative source of data for all publications. One of the major tasks was to ensure that all publications were included in ERA resulting in academic staff being asked to review the accuracy of their publications and advising of any missing publications. This resulted in editing over 10,000 records and processing over 7,000 'missing publications' for inclusion in the submission.

The Australian Research Council (ARC) had determined that all data elements had to be assigned up to three Field of Research (FoR) codes. The ERA ranked journal and conference lists were used to initially assign these to relevant journal articles. Articles in multidisciplinary journals such as *Science* or *Nature* needed to be reviewed before FoR codes could be assigned. Subject librarians provided invaluable help by assigning FoR codes to over 4600 journal articles, 5211 books and book chapters and 4500 conference papers.

Value added information such as the individual journal ERA ranking (each journal was assigned an ERA ranking to indicate its quality eg A, B etc) and citation data was recorded for as many records as possible in order to provide quality and reliable information that assisted to maximise the submission. Institutional affiliation also was added to all publications by adjunct or honorary staff as this was an ERA requirement. The citation elements that the reviewers used for evaluation included:

1. Relative citation impact (RCI) against world and Australian Higher Education Provider (HEP) benchmarks
2. Distribution of papers by RCI Classes
3. Low and high RCI Class ratio
4. Distribution of papers by world centile thresholds, profiled against Australians HEP average
5. Contribution to Australian HEP citations

The University Library played a vital role in providing advice on how best to generate in-house citation data in order for data to be modelled before it was submitted.

Following the public release of the results each institution received static citation counts and benchmarks that would allow for further analysis on specific research groups and centres.

Institutional Repository – UQ eSpace

Subsequent to the ERA program a high level review was undertaken on the collection and processing of publications resulted in moving away from its annual decentralised model to a centralised continuous collection which incorporated robust processing and verification of all publication details. Value added data was also added to the record as part of the revised workflow. The record is then able to be used on various downstream activities such as the annual government Higher Education Research Data Collection (HERDC) and related university management information systems such as the recently launched Q Index. The Q Index provides each UQ researcher with a composite index of research performance over a six year window. The data for publications is imported nightly from the repository.

Major redevelopment work was undertaken on UQ eSpace resulting in *MyUQeSpace* facility being launched in November 2010. It has the following three modules:

1.**M**
y Research – this contains verified publication data linked to an authors ID
2.**P**
ossibly My Research – this contains lists of possible publications – many of which have been ‘seeded’ into eSpace from external services
3.**A**
dd Missing Publications – this allows researchers to submit basic bibliographic details. This is then processed and verified by Library staff.

The repository is now a fundamental infrastructure tool for the University. It is harvested by *Australian Research Online* as well as search engines such as Google and Google Scholar thereby increasing the visibility of UQ research and researchers. UQ eSpace achieved a ranking of 11th in the January release of the Ranking Web of World Repositories list and was the only Australian repository to be in the top 20 listings (Cybermetrics, 2011). The ranking is based on four elements: visibility, size, rich files and scholar.

The Library is a development partner with Thomson Reuters to utilise a number of its web services resulting in automatic import and synchronisation of data from services such as *ResearcherID* (which will be rolled out to academic staff) and *InCites* to UQ eSpace. This will streamline data entry requirements and also provide valuable metric information that can be utilised to measure research performance.

The repository also supports open access publishing. The new features make it easier for academic staff to add an open access version of their work. In addition the Library offers a range of workshops on the benefits of open access and provides advice on copyright issues and licensing issues. For example the Science Commons Addendum Generator (used to change the terms of a contract) is readily available from the Library website².

Realigning Services

In 2010 as part of its strategic planning the UQ Library began planning a number of changes that reflected the substantial shift in the way the Library’s collections and spaces have been used over the last decade, with a strong desire to strengthen the services offered to researchers. This direction was aimed at supporting the UQ strategic plan to increase its support for research that in turn will help it achieve its aim of strengthening the UQ position in world rankings. The need for newer services were further demonstrated during the 2010 ERA project when increasing numbers of researchers requested metrics support for grant applications.

In order to focus services on the two distinct groups of customers – students and researchers, three new service groupings were established:

1.S
 support for undergraduate students and teaching staff would be delivered by the *Library Teaching and Learning Service* that will co-ordinate and deliver services in our network of branch libraries. This service would be responsible for the circulation of library materials, the handling of document delivery requests, course materials, and the provision of general information skills classes to students and support for general reference services – both in person and online.
2.S
 support for academic staff and research higher degree students would be delivered by the new *Library Research Information Service*. Three teams of disciplinary librarians will provide substantial support in areas such as literature searching for grant applications, helping with the description and management of research data sets, research metrics, training, mentoring and supporting research students and advanced information skills training. These librarians would no longer be involved in ‘branch activities’ or supporting general reference service thereby providing them more time to work directly with research staff.
3.T
 o provide policy and support in areas of bibliometrics and data management the *Scholarly Publishing and Digitisation Service* was established. This service also supports UQ's institutional repository UQ eSpace as well as its digitisation services.

This revised structure demonstrated the Library’s commitment to use its expertise to become an active partner in the research cycle by dedicating librarian activities for research/author support. The Library was aware that due to excellent access to digital collections many researchers stopped using the physical library spaces and collections but this did not mean that the Library became invisible. The realignment resulted in more targeted services with specialised positions being created in scholarly publications and data management to provide high level advice and be responsible for ensuring existing services are maintained while establishing new suites of services that are delivered by subject librarians.

² <http://www.library.uq.edu.au/escholarship/sciencecommons>

One of the challenges in the implementation of the revised service structure included staff training. In early 2011 librarians in the Research Information Service were asked to complete a 16 question survey designed to determine their training needs. For example while 11% felt that they could present a class on the H index others felt that they needed either introductory or advanced training. Over 50% of the librarians felt that they could teach more established services such as *EndNote*.

Metrics

Although many librarians had received basic training in metrics it was decided to offer more advanced training. With over 40 librarians to be trained it was decided to deliver the training in a scenario based approach, as this was deemed to be the most effective. It was important that the librarians understood the complexities of providing metrics advice and that in many cases there was no right answer as it depends on the questions being asked. To ensure real life examples were used a range of scenarios were provided that reflected past queries and questions on specific grant applications. Whilst working on the scenarios the librarians were guided through a number of examples relative to each discipline to ensure that they were familiar with a range of tools. To date excellent feedback has been received from librarians and researchers who have been the beneficiaries of this new service. In addition to in-house training expert bibliometric workshops were presented by external consultants reflecting the importance the Library placed on this service.

As a result of the work the Library has undertaken in supporting academic staff with data that can be incorporated into grants the Library is now a regular presenter in seminars aimed at researchers such as the 'Essential knowledge for Researchers' series. These have been well received, for example when the Library offered workshops entitled 'Using metrics in grant applications' they were oversubscribed within an hour of being advertised. Follow up from the workshops has resulted in requests for customized metric reports that also incorporate a range of benchmarking data. The Thomson Reuters database *InCites* is a valuable tool that has been utilized for many of these reports. A revised dataset that will include all researchers at UQ (as opposed to UQ being in the byline) will add to the tools being available.

Data Management

The Library is an active participant in the University's data management programs. The Australian Government has revised the *Australian Code for the Responsible Conduct of Research* (2007). This code which was jointly developed by the National Health and Medical Research Council (NHMRC) and the ARC (two very important funding bodies) provides a framework for institutional policies and procedures. Compliance with the code is a prerequisite for ARC and NHMRC funding.

The Library's role has focused on training, advice and support as illustrated in Figure 1.

Figure 1: Data management cycle (University of Oxford³)



A major focus of the training has been with higher degree students and individual researchers. Now the Library is targeting early career researchers, newly appointed academics and academics approaching retirement. This last group is especially important to ensure that their data is not 'lost' in the exiting process. To help support librarians in the Research Information Service comprehensive documentation has been developed to assist in the training. These include options for the most suitable formats for archiving digital and non-digital data, best options for secure storage and discipline-based repositories for either deposit or description of the collections.

The Library is also actively involved in supporting the Australian National Data Service (ANDS)⁴ - a cohesive collection of research resources from all research institutions, to make better use of Australia's research outputs (Figure 2).

³ <http://www.admin.ox.ac.uk/rdm/>

⁴ <http://www.and.s.org.au/>

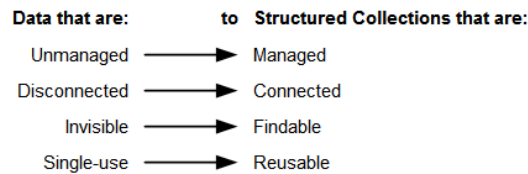
Figure 2:

Australian National Data Service

More Australian researchers reusing research data more often.

ANDS is building the **Australian Research Data Commons**: a cohesive collection of research resources from all research institutions, to make better use of Australia's research outputs.

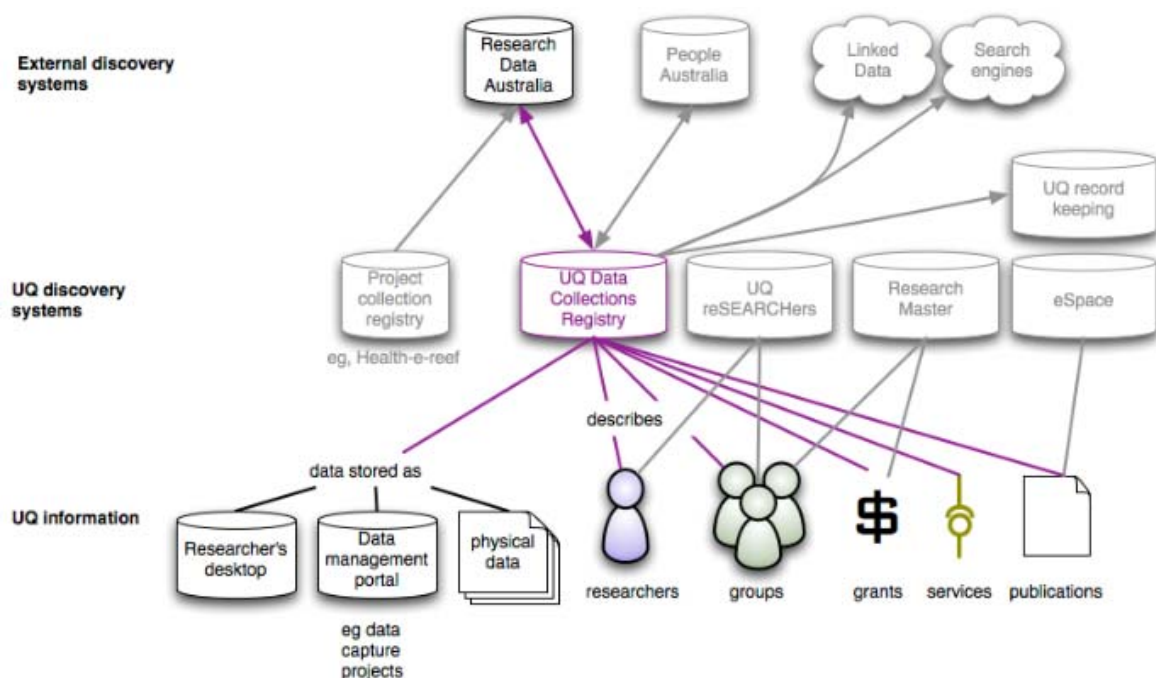
ANDS enables the transformation of:



...so that Australian researchers can easily publish, discover, access and use research data.

Discipline librarians used their knowledge to identify suitable research collections and are now working with individual academics to describe their research collections for inclusion in the national collections registry. This registry is part of the government's *Seeding the Commons* project, which has nodes at many Australian universities. These national projects are designed to create infrastructure within institutions to firstly identify data collections, collect or create metadata to describe them, and then secondly to publish those collection descriptions resulting in improved visibility enabling discoverability of existing research data. The UQ eResearch Lab's *Seeding the Commons@UQ* project is part of that national work, and aims to improve the discovery and re-use of research data at UQ. Where possible the registry will re-use descriptions from existing UQ authoritative sources of information to simplify the creation of metadata. Possible sources of information and downstream users of the UQ Data Collections Registry are shown in Figure 3.⁵

Figure 3:



⁵ <http://itee.uq.edu.au/~eresearch/projects/ands/stc>

ePublishing

As well as providing support to established authors the Library is also exploring ways to create opportunities for emerging authors. Over recent years a range of scholarly e-publishing services have emerged in major libraries as another resource for supporting academic authorship. Over the coming months the Library will work collaboratively with an established publisher - UQ ePress - to investigate the potential of an ePress Service for UQ research students that will give them firsthand experience of being involved in scholarly e-publishing. A service that includes online instructions to authors with article submission, refereeing of papers and final publication including editing, design, layout, proofing, promotion and management of subscriptions will be assessed.

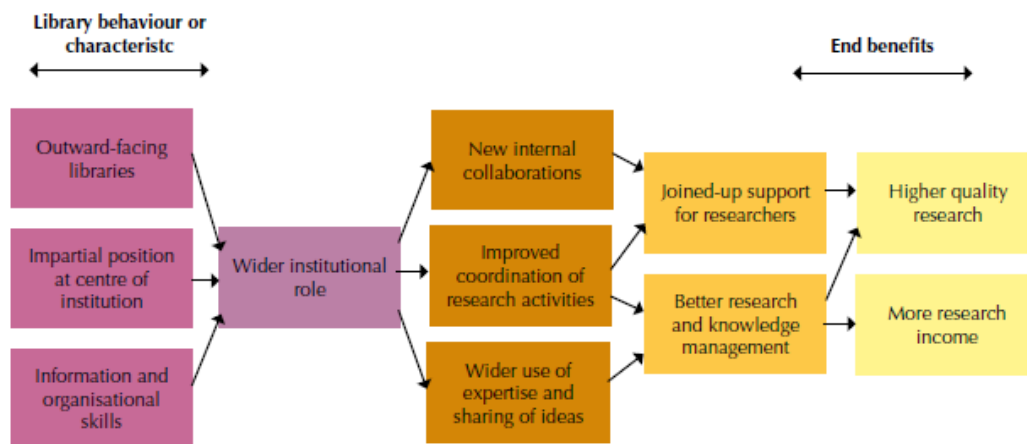
Conclusion

While the realignment is still in its early stages results have shown that its author services are highly regarded and valued by researchers. To date the service realignment has resulted in:

-R
redefinition and redevelopment of the role of the repository to become the institutional enterprise system for all University publications
-R
redesign of librarian positions to provide expert advice and services in the use of bibliometric and data management services together with the establishment of senior positions in these areas
-D
dedicated training in the use of metrics and data management
-C
customized bibliometric reports for grant submissions
-P
partnerships with other units within the University to provide expert advice
-P
partnerships with external data providers to incorporate a number of web services to improve the accuracy of repository data
-In
increased support and advice on various aspects of publishing e.g.: e-publication strategies and services for new and emerging researchers, open access initiatives, copyright and IP issues

By being proactive and participating in the wider role of the institution the Library is viewed as a valuable and active partner in all aspects of the research lifecycle. The creation of the Library's dedicated service groupings allows staff to produce and deliver targeted author services required in the new paradigm of academic librarianship. Figure 4 illustrates the gains of such outward behaviours.

Figure 4: Benefits of outward behaviours for libraries (Research Libraries UK and Research Information Network 201, p39)



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