

Australian Research Libraries and the Research Quality Framework

Abstract

The Federal Government is introducing a new funding model for research in Australian higher education institutions, the Research Quality Framework (RQF). It will require university research groups to submit evidence of research quality and impact in order to receive funding. This paper will look at the likely impact of the RQF on libraries in Australia, based on experience gained through an RQF trial and from reports and research from the United Kingdom, where a similar funding model, the Research Assessment Exercise (RAE), has been operating for a decade.

When Curtin University participated in an RQF trial in 2005 library staff provided extensive support to academics seeking information about their publications. Workshops were delivered to demonstrate important sources of information and individual assistance was given as requested. Indicators of research impact, such as journal impact factors, and the importance of 'quality' publications, has resulted in heightened interest in publishing generally, and citation indexes in particular, among many academics. The UK's RAE experience suggests a range of issues will emerge as the RQF model is implemented. For example, an increase in articles submitted for publication by academics has led to concerns about the quality and number of journals, and the effects on subscription prices. Research examining the relationship between RAE ratings and academic library funding and discussion about methods for evaluating journal use in libraries illustrate how the RAE is being considered in the UK. The paper will conclude by bringing these issues together with suggestions for planning library services in the context of RQF implementation in Australia.

Introduction

In 2004, the Prime Minister announced the Government's intention to change the way funding is distributed to publicly funded research in Australia. Named the Research Quality Framework (RQF), and loosely based on the Research Assessment Exercise (RAE) in the United Kingdom, the purpose of the new funding model is to reward research on the basis of quality and impact. Exactly how assessment of quality and impact will be achieved has consumed many hours of advisory groups' and university staff time since the Prime Minister's announcement.

While the Expert Advisory Group established to develop the RQF deliberated, the universities partnered in the Australian Technology Network (ATN) and Murdoch University carried out an RQF trial. The trial sought to identify research strengths in the institutions and to test some of the assessment criteria being considered for the RQF. At Curtin University, library staff were closely involved in the trial process, providing assistance to research groups, individual academics, and the Office of Research and Development.

The RQF trial experience and discussion and research that have come out of the UK about the RAE indicate a number of ways the RQF might have an impact on research libraries in Australia. The term 'research libraries' is used advisedly due to the possible inclusion of large government funded research organisations, such as the CSIRO. As a consequence of the RQF these

G.Haddow (2006) Australian research libraries and the Research Quality Framework.
CLICK06: ALIA 2006 Biennial Conference, Perth, WA, September 2006

libraries will need to address issues such as staffing and staff expertise, collection management (particularly the resources used to locate information required by the RQF), and reallocation of acquisitions' budgets.

The development of the RQF was one of a series of initiatives driven by the then Minister for the Department of Education, Science and Training (DEST), Dr Brendan Nelson, to tighten accountability measures in Australian universities. A cabinet reshuffle in early 2006 resulted in a change of Minister (to Julie Bishop) and a markedly slower pace in the progress of the RQF to implementation stage. Importantly for research libraries, it gives managers time to prepare for the eventual implementation of the RQF.

The three Rs: the RAE, the RQF trial, and the final RQF model

Research Assessment Exercise (RAE)

The RAE was first conducted in the UK in 1986. Typically, the RAE is held every five years with the most recent being in 2001. Since its inception several changes to the research assessment criteria and ratings system have been made. However, the overall purpose stated in *A Guide to the 2001 Research Assessment Exercise* has always been "to provide ratings of the quality of research conducted in universities and higher education colleges ... [and these] ratings are used to inform the allocation of funds" (Higher Education Funding Council for England, 2001, p. 2). A second purpose is to reward high quality research, thereby providing an inducement for improving the quality of research conducted. The Higher Education Funding Council for England (HEFCE) claims the RAE has succeeded in achieving this aim, reporting higher productivity and effectiveness of researchers and improved efficiency in research management since the 1986 RAE (p. 3). While raw data may support these claims, they are drawn from a period in which accountability and improved financial management in higher education has become a focus across all aspects of management in the sector (Schmidtlein, 2004). Moreover, the data do not reflect the less positive impacts of the RAE, such as administrative costs, a reduction in research diversity, and publishing pressures; points that are discussed below.

To place the discussion that follows in context, it is useful to present a brief overview of how the RAE operates and what might be expected in the final RQF model. Universities select research groups to submit information and statements about their research activity over a set period. Assessment of submissions is carried out by discipline-specific panels of experts. There is no limit to the number of submissions a university can put forward, but they must fit within broad subject areas determined by the RAE. There were 67 units of assessment in 2001. The information required is usually for a period of five years and includes:

- research staff details;
- four examples of research output by individual staff members;
- information about research achievements and future strategies; and
- quantitative data relating to research funding, research students, and esteem.

Each submission is assessed by the appropriate expert panel and allocated ratings according to the research quality evident. The ratings range from research that fails to achieve “levels of national excellence” (1) to research that achieves “levels of international excellence in more than half the research activity submitted” (5*) (Higher Education Funding Council for England, 2001, p. 5). Funding is allocated according to the ratings (in 2001 no funding was given to research groups rated 1 or 2) and the ratings are published. A higher rating not only provides research groups with the means to continue their research activities, it is also an excellent promotional tool to attract students and staff to an institution.

Research Quality Framework (RQF) Trial

When the ATN partners and Murdoch University conducted an RQF trial in 2005, the criteria for assessment and quality ratings were based very much on the RAE model. One important difference was a focus on quantitative data relating to publications, such as journal impact factors and citations. It was this aspect of the trial that created high demand for library staff to become involved.

Generally, the awareness of citations and journal impact factors amongst academics was low, if existing at all. Impact factors are not understood by all librarians, so it is not surprising that they were the source of a great deal of confusion for researchers. Library staff responded to questions asking why some journals didn't have impact factors and if impact factors were calculated for books. In one submission impact factors were rounded up and in another ISSNs were reported as impact factors after researchers misinterpreted the information given against journals in the DEST list. Individual and group training sessions were held to assist researchers locate citations for publications between 2000 and 2004 and to find impact factors for journals in which articles appeared. However, the difficulty in extracting these data from Web of Science and Journal Citation Reports meant that library staff were called on to conduct citation searches for individuals and for groups of academics who had come together for the purpose of the trial.

Researchers in the humanities and social sciences were disadvantaged because much of their research output is not in the form of journal articles. Even in cases where journal articles were listed as research output the probability that these journals were indexed by Thomson Scientific ISI was extremely low. In some areas of the sciences, particularly those with a regional focus, academics had difficulty demonstrating evidence of research quality as reflected in citation numbers and journals with high impact factors.

Individual research groups involved in the trial received assessment reports from the panels established to rate research quality, however a full report on the trial has not been released. This is unhelpful not only in terms of generating discussion about the trial overall, but also for the library staff who assisted during the trial. A significant amount of staff time and effort was expended to provide consistent and transparent data within guidelines which lacked clarity. Due to the range of resources available to locate citations (Web

of Science, Scopus, Google Scholar, and databases that give internal citation numbers) and the differences across discipline areas, library staff were compelled to take a variety of approaches to gathering citation data. For this reason library staff would be interested in the assessment panels' opinions about the usefulness of the data provided for making comparisons and assessment of research quality.

Preferred RQF Model

At the time of writing a final RQF model has yet to be announced. A report outlining the preferred model was released in September 2005 (Department of Education Science and Training, 2005), but this left many questions unanswered. It has been suggested that up to thirteen expert panels will assess research output and the data required will be similar to that submitted in an RAE. Considerable ambiguity remains about the way quantitative methods will be used to assess research output. In the 'underlying principles' section of the report it is noted that to achieve transparency and effectiveness "the RQF must be based on valid and accurate assessment, including the use of reliable/repeatable measures/metrics" (p. 8). The report later states, "the context statement will include metrics, where appropriate to discipline areas" (p. 12).

It is not the intention of this paper to discuss the pros and cons of citations and impact factors as measures of research quality or impact. Many publications over many years have dealt with this topic in depth (see for example Ball, 2006; Monastersky, 2005; Seglen, 1997; Smith, 1981). However, a passing knowledge of citations and impact factors suffices to appreciate the difficulties inherent in their use to compare research output across disciplines and, in some cases, within disciplines. In general, most sciences are relatively well-served by the Thomson Scientific ISI citation indexes, but much of the humanities and social sciences is invisible in the indexes. When country (Australia) is factored in further complications arise due to the indexes' bias to journals published in North America and Western Europe. With the highest rating of research quality in the RQF likely to focus on international impact, it would seem citations and impact factors will be unavailable as evidence for many research groups in Australian universities.

At a forum organised by the Council of Australian University Librarians and DEST (Council of Australian University Librarians, 2006), presenter Linda Butler expressed concern about how citation data would be collected to ensure consistency for comparative purposes. Butler also noted there was a need to clarify the purpose of collecting citation data. Was it to inform or validate quality assessment? In relation to impact factors, Butler felt strongly that they should not be used to assess quality in the RQF because impact factors are not a measure of individual performance. For now, the Australian higher education sector has to wait for answers to these and many other questions until the Research Quality Framework Development Advisory Group completes its deliberations and releases the final RQF guidelines.

The impact of the RAE on research and publishing and libraries

Because research focus and output in the form of journal articles is closely related to the collections and resources managed by research libraries, it is valuable to draw on the experience of the UK in relation to how research and publishing have been affected by the RAE. Naylor succinctly describes the impact of the RAE, stating "The exercise which purports to be assessing research is actually bringing considerable influence to bear on what research is done, how research is done, and how research is presented. In this set-up, the scholarly journal is king" (2001, p.150).

Impact on research

One criticism of the RAE is that researchers shift the focus of their research to areas they believe are 'RAE friendly' (Shewan & Coats, 2006), which in the longer term reduces the diversity of research (Hall, 2006). 'RAE friendly' research can be interpreted as that which is published in high impact journals. These are journals which offer fewer opportunities for applied or practice-based research papers. For university departments with strong links to a profession, such as library and information studies (LIS), this shift in research can mean professional links are eroded as academics focus on producing scholarly research articles.

There is also a concern that failing to make a submission in a research assessment exercise or low ratings following a submission will lead to the establishment of teaching-only departments; losing the important teaching-research nexus that most academics regard as critical to quality higher education (Shewan & Coats, 2006). Australian library educators might be interested in Judith Elkin's (2002) paper in which she comments on the poor quality of submissions by LIS researchers in the 2001 RAE. Elkin's assessment was based largely on the type of outputs submitted (many of which lacked research content) and weak research strategy statements.

Impact on research output

As a result of the RAE, journal articles have become the preferred research output, and the pressure to publish in high quality journals within the time frame of the RAE has had a variety of consequences (Naylor, 2001). Journal editors report they are receiving increasing numbers of articles for publication, many of which are of a lesser standard (Bence & Oppenheim, 2004; Elkin, 2002; Walford, 1999). At the same time, it has been suggested that because editorial work and book reviews are not given the same quality rating as a journal article, researchers are reluctant to spend time on these activities (Lipsett, 2006; Walford, 1999).

Identifying high impact journals in many areas of science may be relatively simple, but finding journals with high impact in other disciplines is not. Essentially, this problem stems from the resource used to locate information about a journal's impact - the Journal Citation Reports (JCR) published by Thomson Scientific ISI. In addition, the RAE provides no guidance about which journals are regarded as high quality. Bence and Oppenheim (2001)

studied publications submitted by business and management researchers in the 1996 RAE and found a large and diverse range of journal titles. The researchers noted the difficulty in creating clear delineations around fields of study and the journals published for those fields, recommending RAE panels produce lists of 'core' journals.

The focus on high impact journals will affect many journal publishers. Competition between publishers to get titles indexed by Thomson Scientific ISI will increase in an environment that rates quality on such criteria. Journals with local or regional subject matter will be disadvantaged if they cannot demonstrate quality in some form and yet these are often the first publishing choice for researchers working in such a field (Walford, 1999).

LIS research and impact on libraries

While an RAE submission does not require citations data, citations and other bibliometric variables have been used by LIS researchers to study aspects of the RAE. It is somewhat ironic, though wonderfully circular, that this work has in all probability been submitted as a research output in later RAEs. Several studies looked at correlations between citations and RAE ratings (Holmes & Oppenheim, 2001; Oppenheim, 1995,1997) to illustrate the usefulness of citations as a measure of quality; possibly fuelling recent discussions in the UK about using quantitative data only in future RAEs ("2008 - an RAE too far?," 2006).

Research has also been conducted into whether library funding is associated with RAE ratings (Oppenheim & Stuart, 2004). At the institutional level, higher funding of an academic library correlated with higher RAE ratings. These findings were tempered with the argument that it is logical to assume strong research universities have well-supported libraries. The different budget models libraries use to allocate acquisitions funds for departments within universities meant the study encountered problems when looking for associations at the departmental level. For a better understanding of the role libraries play in RAE ratings, detailed and consistent information is needed about the way budgets are allocated. Oppenheim and Stuart (2004) suggest libraries may want to distinguish between research-intensive and teaching-intensive departments in their budget decisions and note the importance of subject specialists in libraries to facilitate effective collection development decision-making.

As journal articles have become the preferred research output, academics have developed a greater interest in journal rankings, circulation data, and the delay between acceptance and publication of an article (Davies, 2002). Davies places this commentary within a trend for increasing accountability by library management and the complications created by managing serials in a digital environment. The range of serials acquisitions models (eg. aggregator databases, publisher packages, and individual subscriptions) and annual rises in subscription costs makes for unwieldy and complex conditions in which libraries must manage. Combined with researchers' increased interest in

journals, Davies argues it is imperative that libraries develop reliable methods to measure the use and value of serials in their institution.

Personal communication with an academic with extensive RAE experience, on assessment panels and as coordinator of RAE submissions, confirmed and supplemented many of the points made above. Librarians at his university assisted researchers locate citation data and identify journals for publication, with regular training sessions provided to academic staff. When required, library staff retrieve the full text of articles being submitted in an RAE, both during the assessment period and just prior to submission deadlines. In relation to collections, the academic felt shifts in focus had occurred. Journal subscription budgets had been reallocated to include more of the higher impact scholarly journals and monograph collections were reflecting the research foci evident in the RAE submissions (pers. comm., John Glasson, May 19 2006).

How Australian research libraries can prepare for the RQF

Although uncertainty remains about the data required for, and research assessment methods of the RQF, the experiences in the UK and research relating to the RAE are an excellent guide to how the RQF may affect Australian research libraries and library educators. Impacts on libraries fall into three general areas: collection development; staffing; and budgeting. Library educators might also reflect on the nature of their research and publishing activity as they consider their approach to the RQF.

Collection development

Research libraries will face balancing the resource needs of researchers involved in RQF submissions against the ongoing teaching resource needs, all within a climate of greater accountability, budgetary constraints, and increasingly complex journal subscription models. Changes of any type in a library's collection development will incur staff time costs.

A focus on specific research areas for assessment in the RQF will affect the collection development decisions of libraries. For institutions with existing research strengths the extent of the impact on collection development may be negligible. However, in institutions where research foci are yet to be determined the library will have to carefully monitor the strategic research directions taken by their organisation. Monograph and serial collections will have to reflect any shifts in research strategy, with high impact journals playing an important role. Moreover, moves to classify some departments as teaching-only will influence collection development decisions.

RAE ratings feed into related areas, such as attracting research-active staff and higher degree students, and as evidence of research quality in grant applications. They can also lead to poaching of academics and whole research groups by universities (Holmes & Oppenheim, 2001). All of these factors will affect the demand on library resources by researchers in an institution.

Resources used to locate and collect information required for RQF submissions will impose further complications in collection development. Depending upon the final RQF model, these resources might include citation indexes (there are now two major databases) and access to full text journal articles. Institutional repositories may gain importance as a means to ensure researchers' work is readily accessible in full text to assessment panels. In addition, demand for institutional repository support could increase as researchers hoping to gain greater exposure (and therefore citations) to their publications recognise the benefits of making their work available in open access form.

Staffing

The final RQF model will determine the extent to which library staff are involved in an assessment exercise. However, the RAE experience suggests some degree of library staff assistance will be required for academics who submit their research for assessment. Training of library staff in the use of resources to identify core journals in a field, locate citations (if included in the RQF), and assist in the collection of research outputs should be anticipated.

In turn, library staff will need to offer training and advice to academics wishing to pursue publication in high impact journals and open access publishing models. The suggestion that subject specialists in libraries may be important in RAE outcomes is also a staffing issue research libraries might consider (Oppenheim & Stuart, 2004).

Budgeting

Library funding, while not stationary, is certainly not increasing at a rate that permits subscriptions to new serials and databases without the cancellation of others. As noted above, changes of this type impose a cost on managing a collection. Shifts in the focus of a journal collection in line with an institution's research strategy is highly likely to result in additional subscription costs, as high impact journals are usually more expensive. Staff training and time to assist in an RQF process, and the resources involved in developing and managing institutional repositories will require funding allocation.

Library educators

Library educators in Australia need to consider their role in higher education institutions. Will they concentrate on teaching or aim to submit their research for assessment? The experience of an RAE assessor (Elkin, 2002) suggests many library educators are not producing quality research outputs. A decision to submit research for assessment that is lacking in quality will affect the long term viability of research in a LIS department and its ability to attract students and research-active staff. Also of note is the impact seen on research outputs when a research-active staff member moves to another institution (Holmes & Oppenheim, 2001). This can be particularly damaging if citations are used in the RQF as a measure of research quality.

Conclusion

Currently, there is a great deal of uncertainty about how the RQF will affect research in Australian universities. The first RQF will be conducted in 2008 with funding to commence in 2009, but submission guidelines and assessment criteria are yet to be released. At the same time, higher education institutions in the UK are discussing the future of the RAE after it was announced that a review of that model would be undertaken. Vice chancellors quoted in *The Times Higher Education Supplement* expressed the full range of views, from applauding the RAE's potential demise to disappointment that the model may change ("2008 - an RAE too far?," 2006). It might be assumed that similar differences exist amongst Australian vice chancellors. Certainly, the older, wealthier institutions in Australia tend to have a strong research base and are less likely to feel the impacts of an RQF. A recent newspaper article captured the concerns of others with a report that voluntary separation packages were being offered to staff of one Australian university because they lacked a strong research profile (Macnamara, 2006).

Libraries within these institutions will feel the effects of the RQF to varying degrees, but all will face decisions about staffing and material resources to support their institution in an RQF exercise. The issues discussed in this paper provide some basis upon which research libraries can prepare and plan their staff and services for the RQF in 2008.

Bibliography

- 2008 - an RAE too far? (2006, 27 April 2006). *Times Higher Education Supplement*. Retrieved: 27 April 2006, from <http://www.thes.co.uk>.
- Ball, P. (2006). Prestige is factored into journal ratings. *Nature*, 439(16 February), 770-771.
- Bence, V., & Oppenheim, C. (2001). Journals, scholarly communication and the RAE: A case study of the business and management sector. *Serials*, 14(3), 265-273.
- Bence, V., & Oppenheim, C. (2004). The role of the academic journal publications in the UK Research Assessment Exercise. *Learned Publishing*, 17(1), 53-68.
- Council of Australian University Librarians (2006). *RQF Forum - Bibliometrics and Other Indices [Notes from the presentation & Q&A]*. Retrieved: May 5 2006, from <http://www.caul.edu.au/meetings/rqf2006researchindicators.html>
- Davies, J. E. (2002). Counting on serials: Management and serials metrics. *Serials*, 15(1), 35-39.
- Department of Education Science and Training. (2005). *Research Quality Framework: Assessing the Quality and Impact of Research in Australia*, Canberra: Department of Education Science and Training. Retrieved: October 9 2005, from <http://www.dest.gov.au/NR/rdonlyres/AF74E4A9-C7DD-48A4-8D94-847FF35C6B97/7845/RQFPreferredModelPaper.pdf>.
- Elkin, J. (2002). The UK Research Assessment Exercise 2001. *Libri*, 52, 204-208.

- Hall, P. (2006, March 22 2006). Reduced research undermines scientific progress. *Financial Review*. Retrieved: March 24 2006, from <http://www.afr.com/articles/2006/03/22/1142703391343.html>.
- Higher Education Funding Council for England (2001). *A Guide to the 2001 Research Assessment Exercise*. Retrieved: February 7 2006, from <http://www.hero.ac.uk/rae/Pubs/other/raeguide.pdf>
- Holmes, A., & Oppenheim, C. (2001). Use of citation analysis to predict the outcome of the 2001 Research Assessment Exercise for Unit of Assessment (UoA) 61: Library and Information Management. *Information Research*, 6(2). Retrieved: 15 August 2005, from
- Lipsett, A. (2006, March 17 2006). Journals blame RAE for shortage of young editors. *Times Higher Education Supplement*. Retrieved: April 27 2006 from <http://www.thes.co.uk/>.
- Macnamara, L. (2006, April 26 2003). Monash under fire for trial. *The Australian*, 23. Retrieved: May 16 2006 from Factiva database.
- Monastersky, R. (2005). The number that's devouring science. *The Chronicle*, 52(8). Retrieved: October 12 2005, from <http://chronicle.com/free/v52/i08/08a01201.htm>.
- Naylor, B. (2001). The king is in the altogether? *Serials*, 14(2), 149-153.
- Oppenheim, C. (1995). The correlation between citation counts and the 1992 Research Assessment Exercise ratings for British library and information science university departments. *Journal of Documentation*, 51(1), 18-27.
- Oppenheim, C. (1997). The correlation between citation counts and the 1992 Research Assessment Exercise ratings for British research in Genetics, Anatomy and Archaeology. *Journal of Documentation*, 53(5), 477-487.
- Oppenheim, C., & Stuart, D. (2004). Is there a correlation between investment in an academic library and a higher education institution's rating in the Research Assessment Exercise? *Aslib Proceedings*, 56(3), 156-165.
- Schmidlein, F. A. (2004). Assumptions commonly underlying government quality assessment practices. *Tertiary Education and Management*, 10, 263-285. Retrieved: May 8 2006, from SpringerLink.
- Seglen, P. O. (1997). Why the impact factor of journals should not be used for evaluating research. *BMJ: British Medical Journal*, 314(February 15), 498-502.
- Shewan, L. G., & Coats, A. J. S. (2006). The Research Quality Framework and its implications for health and medical research: Time to take stock? *MJA: Medical Journal of Australia*, 184, 463-466. Retrieved: May 1 2006, from http://www.mja.com.au/public/issues/184_09_010506/she10099_fm.html.
- Smith, L. C. (1981). Citation analysis. *Library Trends*, 30, 83-106.
- Walford, L. (1999). The Research Assessment Exercise: Its effect on scholarly publishing. *Learned Publishing*, 13(1), 49-52. Retrieved: May 8 2006, from <http://www.alpsp.org.uk/volcont.htm>.