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Research support in a research assessment environment: The experience of 'new' universities

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Abstract

The role of libraries in research support has attracted increasing notice in the past decade. This paper contributes another perspective on the topic by reporting on a study that used qualitative research methods to examine research support at six 'new' universities, all of which had significantly improved their ranked position after the 2008 Research Assessment Exercise. The study found that the influence of individuals and institution-wide initiatives are important in gaining a place in the discussions and activities surrounding research support, and a range of approaches to collection management are being implemented to maximize resources and information access. In the future, libraries will have to consider how best to develop expertise and skills in areas that add value to the services provided to researchers. They will also need to develop strategies for engaging and meeting the needs of new researchers.

1 Introduction

While the formal and highly structured assessment of UK higher education institutions' research is in its third decade and undergoing a major overhaul, Australia's research assessment exercise is in its infancy. First trialled in 2009, the Excellence in Research for Australia (ERA) differs in a number of aspects to the Research Assessment Exercise (RAE) as it was; the Research Excellence Framework (REF) as it is for 2014. It is the similarities however, that were considered most useful to focus on in this investigation of the experiences of UK academic libraries in a research assessment environment. The primary aim of the study that is reported in this paper was to gain an understanding of these experiences in order to inform Australian academic libraries.

Libraries in UK higher education institutions (HEIs) have worked alongside researchers and research managers as they prepared submissions to the RAE since 1986. Over the 26 year period to 2012, the interest in research support by HEI libraries has seen a sharp rise. The number of major reports, briefing papers, and

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articles are testament to the increasing focus on research support, much of it occurring since 2003 (see for example, Ashworth, 2009; Auckland, 2012; CIBER, 2010; Joint Information Systems Committee and British Library, 2012; Research Libraries UK and Research Information Network, 2011; Wakeham & Garfield, 2005). This body of literature is a valuable resource for the Australian academic libraries working in a research assessment environment. The study reported here was designed to contribute further to that literature, as well as to directly inform Australian academic libraries on how they can best support their institution in a research assessment environment.

The study approached this question by investigating the experiences of libraries whose institution had significantly improved its ranking in the 2008 RAE. It further narrowed this criterion by including only those HEIs established around 1992, the so-called 'new' universities. The rationale for this decision is based on the researcher's own institution in Australia, which like the 'new' universities in the UK was established as a result of government policy designed to extend the availability of university education and reduce the number of different types of education institutions. Loosely based on a CIBER (2010) publication which reported on research support at four research-intensive universities in the UK, this study sought to gain a deep understanding of the role of libraries in a research assessment environment and how their services, collections and other activities contributed to successful RAE results. While the study was undertaken by an Australian and aimed to inform an Australian audience, its findings are equally, if not more relevant to academic librarians in the UK. Please note that the term 'library' has been used in this paper for consistency only and it does not reflect the range of titles used at the institutions that participated in this study and elsewhere.

2 Background

With the primary aim to explore the potential for academic libraries to contribute to improved rankings in a research assessment activity, the study's initial objectives were to determine how academic libraries contributed to the 2008 RAE in relation to: staff training and expertise; additional resources for library staff and collections; services to researchers; collaboration between the library and other units in the university; and costs incurred in any the above.

The interest in research support in UK HEIs, and indeed across Europe (League of European Research Universities, 2012), has seen tremendous growth in the last decade. In part this can be ascribed to the work of the Joint Information Systems Committee (JISC, n.d.a), created in 1993, which engaged in a major expansion of its programmes in the late 1990s. The introduction of the Focus on Access to Institutional Resources (FAIR) programme in 2002 was instrumental in encouraging the establishment of institutional repositories in HEIs, and in 2009 the Research Data Management programme foregrounded another important initiative with implications for libraries.

An early paper (Hanson, 1995) commented on the predominantly passive/reactive nature of academic libraries in research support and pre-empted many of the issues raised in later publications, including institutional repository and RAE

activities with which libraries can engage. But it was a significant and large-scale study by the Research Support Libraries Group in 2003 which opened the topic to wider discussion. A recommendation of the report led to the creation of a new agency, the Research Information Network (RIN), which was responsible for commissioning a number of reports. This work, undertaken in RIN's eight-year existence, bears witness to the agency's impact in raising awareness of research support. Amongst the many findings of the 2003 report is a statement that illustrates the challenges faced by academic libraries then, and continues to this day: "Information providers have been hit by a double crisis of volume and cost which shows little sign of abating" (Research Support Libraries Group, 2003, 23).

Between 2008 and 2012, several reports were published about research support (see for example: Auckland, 2012; CIBER, 2008, 2010; Joint Information Systems Committee and British Library, 2012; Kroll and Forsman, 2010; Research Libraries UK and Research Information Network, 2011). Some focused on research support directly, while others examined the value of libraries, the information behaviour of researchers of the future, and the skills required by library staff. Their conclusions range from painting a rather bleak future for libraries to highlighting their benefits to HEIs.

Two reports, CIBER (2010) and Kroll and Forsman (2010), were published following a collaboration between RIN and the Online Computer Library Center (OCLC). They used the research lifecycle (Joint Information Systems Committee, n.d.b) as a framework for examining research support at research-intensive universities, in the UK and US respectively. Notable in the findings is the level of researchers' awareness of library services and collections. For example, Kroll and Forsman (2010, 17) remark on the contrast between researchers' reliance on electronic journals "but spend little or no thought on how that content is made available to them". The authors also note researchers' lack of awareness of the expertise residing in libraries and the services available to them (Kroll and Forsman, 2010, 18). Similar issues were raised by Wakeham and Garfield (2005, 181) who suggested the relationship between the library and researchers is becoming more distant with the increasing availability of electronic resources. According to the CIBER (2010, 19) report, researchers by-pass the library for resources that are not easily accessible, using instead "informal exchange of journal articles" and there is a perception that libraries are primarily about collections and students. Common to the CIBER and OCLC studies was that "information-based support services ... tend to focus on the initial and latter stages of the research process" (CIBER, 2010, 17). These are the 'ideas' and 'publications' stages of the research lifecycle. It also appeared that there was "little enthusiasm or awareness of the benefits claimed for institutional repositories" (CIBER, 2010, 15), an important mechanism for promoting research and increasing the visibility of a researcher's work. Amongst its recommendations, the CIBER report points to the importance that libraries collaborate with their institution's research office when considering research support activities.

Presenting a more optimistic view on the value of libraries in research support, a Research Libraries UK and RIN report (2011) mapped characteristics of libraries to research-related 'end benefits'. Contrasting with the CIBER (2010) findings,

this study noted the library-managed institutional repository "has significantly increased its profile as a service that can provide valuable support to research across the institution" (Research Libraries UK and Research Information Network, 2011, 20) and saw repositories "playing a crucial role in the preparations and submission" to REF 2014 (36). The adoption and implementation of research information systems was regarded as a further opportunity for libraries to contribute through their institutional repositories (Research Libraries UK and Research Information Network, 2011, 37). The report commented on the ongoing importance of archives and special collections to some disciplines; a role also outlined by Ball and Spencer (2011). Research Libraries UK and Research Information Network (2011) recognised the range of strategies in place to meet the information needs of researchers while operating within limited budgets and remarked on two important characteristics of libraries which, to some extent, protect it. They are perceptions of the library in an "impartial position at centre of institution" (Research Libraries UK and Research Information Network, 2011, 39) and the "legacy perception of library as home of knowledge" (61). It warns the latter may not persist into the future as new generations of researchers born into a digital world increasingly enter the academic workforce (Research Libraries UK and Research Information Network, 2011, 61).

The information behaviour and information skills of future researchers have been the subject of two reports (CIBER, 2008; JISC and the British Library, 2012). A common finding was that the new generation of researchers are no better equipped than their older colleagues in relation to information skills. Where they differ is how new researchers seek information, which is increasingly without the assistance of libraries (peers are often the preferred source), and it is this factor that makes it critical for libraries to "start ... effecting that shift from a content-orientation to a user-facing perspective and then on to an outcome focus" (CIBER, 2008, 34).

To address the changes taking place in the research workforce, Auckland (2012) sought to identify the skills required of library staff to support research in the future. Important amongst the findings were the skills to forge relationships in the research community, including collaborating on research projects, and data management and curation skills (Auckland, 2012, 43). Knowledge of bibliometrics and the capacity to support research assessment activities, as well as a role in "scholarly communication and the effective dissemination of research outputs" (Auckland, 2012, 78) were also noted as highly desirable.

Knowledge of bibliometrics gained importance with the redesigned REF. Until 2008, evaluation of all RAE units of assessment (UoA) relied solely on peer review. From 2014, citations will be available to inform assessments in a number of discipline areas, primarily the sciences. The use of citations in research assessment has been implemented in the Australian ERA and despite some changes to the discipline areas subject to citation analysis, they remain a key assessment mechanism. Significantly for libraries, expertise relating to citations and the various indicators drawn from citation analysis are closely associated with library and information science research and practice. As skilled users of citation resources, such as *Web of Science*, the inclusion of citations in research

assessment presents an opportunity for libraries to contribute to their institution's research assessment activities. This has been acknowledged in a number of papers

(Ashworth, 2009; Bradbury and Weightman, 2010) describing the research support provided by libraries at UK HEIs and in the appointment of a bibliometrics librarian at a research-intensive university in the UK (CIBER, 2010).

The use of citation data is one of the most important differences between the ERA and the REF. In the former, citations data is a primary indicator of quality for all science fields and several social sciences, whereas the REF is using citations data as supplementary to peer review. In addition, a UK HEI can select the UoAs it will submit for assessment while Australian universities are required to submit all eligible outputs for assessment.

3 Methods

To gain a deep understanding of the role of academic libraries in a research assessment environment, qualitative research methods were adopted in this study. Semi-structured in-person interviews were recorded and transcribed by the researcher, and the data were analysed using the constant comparative method (Westbrook, 1994). Ethics approval to conduct the study was granted by the researcher's university.

3.1 Selection of participants and interviews

The selection of universities for inclusion in the study was based on two criteria, firstly that the institution had gained university status in the 1990s, known as 'new universities', and secondly the institution had experienced a substantial rise in the Times Higher Education rankings (2008) between the 2001 and 2008 RAEs. On the basis of these criteria, six institutions were contacted to participate in the study. They were: Anglia Ruskin University; Birmingham City University; Bournemouth University; the University of Brighton; the University of East London; and the University of Hertfordshire.

A summary of information from the library and research office webpages at each of the universities was prepared for the researcher's purposes only. From this information, a senior manager at each library was identified and sent a personally addressed email explaining the purpose of the study and requesting participation by relevant staff. All managers agreed to participate and nominated a staff member to arrange an interview time. Information sheets, consent forms and discussion points for the interviews were distributed to the nominated staff at least a week prior to the arranged time. The interviews took place in February and March 2012 at a location chosen by the participants. In total, fifteen people participated in the six interviews. Four interviews were attended by two or more library staff, and a staff member associated with the research office attended two of the interviews. The interviews were recorded and conducted as a group discussion. All those attending contributed to the discussion, which lasted 90 minutes on average. Field notes were prepared immediately following each interview and these included the main points raised and the researcher's perceptions of the interview and issues faced at the institution. Additional

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documentation, such as strategic plans, lists of programs delivered by the library, and papers written by participants for conferences or publication, was made available to the researcher at the interview or soon afterwards via email.

A verbatim transcription for each of the interview recordings was undertaken by the researcher. Combined with the impressions gained during the interviews, the process of transcribing provided invaluable additional insights into the issues discussed and assisted in the identification of themes in the data analysis stage.

3.2 Data analysis

In the data analysis stage, an iterative and systematic approach was taken to identifying themes. Bradley's (1993, 445) method of "identifying meaningful units, grouping these together in categories, and developing relationships between categories" was applied to the interview transcripts and other documentation. Common points in the interview texts were highlighted and reconsidered following the reading of each transcript, so that "joint coding and analysis during the continual review of data" took place (Westbrook, 1994, 246). In this way, interim summaries (Walliman, 2011) were created and a series of possible themes identified and then reviewed, comparing where these themes may differ across the data. The aim of the analysis was to reveal the central issues raised by participants, without losing individual perspectives or the context in which the participants responded. Finally, a draft of the paper was sent to participants encouraging their feedback. This step was taken to ensure the researcher's interpretation of participants' comments was reasonable and did justice to their own recollection of the interview. Feedback was received from three participating libraries.

The inclusion of participants' quotes below serves to enrich the findings reported. To ensure confidentiality and anonymity the quotes are not identified in any way.

4 Findings

Each of the universities included in the study had improved their position in the Times Higher Education ranking of RAE results between 2001 and 2008: from 80 to 59; 91 to 65; 93 to 58; 96 to 68; 107 to 75; and 121 to 86. These represent significant rises in the ranking - between 21 and 35 places. Alongside the recognition of improved research performance, the universities remain committed to delivering a wide range of courses to large student populations. Student numbers at the six universities vary; the smallest being around 17,000 students to the largest with 31,000 students. Teaching and research activities at the universities are spread across at least two campuses, in some cases located in different towns which not only involves substantial travel and time but also has implications for collection development. The libraries are differently named and managed under different structures. Some are stand-alone units, others include 'learning' in their title, and some are part of much larger management units which include university information systems.

From the extensive qualitative data gathered in the interviews, websites and other documents, several overlapping themes emerged that widened the initial focus of this study from library activities to encompass university strategy, structures and

systems, and the future. These broad themes are discussed below with quotes (in italics) by participants to illustrate particular perspectives; beginning with a general overview of how the 2008 RAE results influenced or were influenced by local events at each university.

4.1 2008 RAE success

The universities' 2008 RAE success appeared to rest on a few strong research areas. With 67 units of assessment (UoAs) available for submission in 2008, the participant universities made submissions to at most 15, and as few as 7 UoAs. In accounting for the 2008 results, participants noted it was:

very strategically done

very much a targeted submission...we wanted to make sure it was quality rather than quantity

all carefully controlled from centre

a... central group making decisions about what was included and what wasn't

A research office participant remarked: "those universities that do well must be organised".

While these comments indicate that the universities took a strategic approach to the 2008 RAE, it was the excellent results that raised the profile of research across the university still further. This is evident in the participants' descriptions of the post-2008 period, such as:

he [Vice Chancellor] was very much pursuing the switch to research and to research-led teaching

there's been quite a lot of tactical thinking about where the university should be going

there was the wider research strategy in the sense of increasing participation in research and supporting researchers

The initiatives and activities that have occurred since 2008 are discussed below, but it is worth noting that in relation to the 2008 RAE success, as the *Times Higher Education* (2008) article states: "it is not clear how much these improvements will convert into funding". In some cases additional research funding gained through the 2008 RAE was distributed to the discipline areas involved in the submission or it was used to establish strategic research grants and training schemes. At one university the library secured additional research resources after the 2001 RAE and another received capital funding for one-off resources following the 2008 RAE, but generally, as one participant remarked, "it didn't come our way".

There was little evidence of the libraries' contribution to the 2008 RAE with the exception of the library which had received funding to acquire new resources after the 2001 RAE. In this case participants recalled "the research administrators found us very useful for helping them cope with getting the submissions right" and one academic specifically noted the library's contribution in an email. Otherwise, participants speculated that library staff working closely with

submitting areas may have rendered assistance in finding hard copies and bibliographic details of publications, but most often "there wasn't any requirement

4.2 Strategy, (re)structures, and culture

for help from the Library to prepare the submission".

Although several of the universities had experienced a maturing of research prior to 2008, an overarching sense gained from the interview data was that the years just before and after 2008 were significant in terms of the increased involvement of the libraries and the development of a whole-of-university research strategy. This is illustrated in one participant's comment: "really it's been the build-up since then when the greatest changes have happened".

Strategic efforts to increase and support research at the universities have included the recruitment of new senior managers with a remit to drive research, the establishment of internal research grants and the introduction of human resources policies that require academic staff to have completed or be working towards a PhD. Accompanied by restructures aimed at managing strategy, most of the universities have experienced a culture change that has seen research "on an equal billing" with teaching and learning which had been the primary focus for many years. Voluntary severance or redundancy schemes, while not unique to this period, were implemented in a number of the universities to give priority to research-active academic staff.

In terms of strategy from 2008 until the present, participants commented:

the University has restructured recently and in recognition of its really very ambitious aims of research grant capture and so forth

the message from the top is very much we are also a research university

there was the wider research strategy in the sense of increasing participation in research and supporting researchers

[there is a new] teaching and learning strategy which is very much based on a research culture filtering down

This last reference to linking research and teaching was evident at all the universities; mindful of the funding gained from teaching but with their sights set on increasing research activity. At one university where there always "has been a culture, even if you are a teaching academic that you would be an active researcher as well", a participant also recognised that "research is so focused on now". A consequence of these shifts in strategy is discussed below.

The Vice Chancellor (VC) was seen as the main catalyst for the changes that occurred, whether related to structures or processes. Five of the universities had appointed a new VC between 2007 and 2009, and their influence was remarked on, for example:

the situation at the University had changed with the new Vice Chancellor who identified research in general, and competing in the RAE in particular, as a strategic priority

there has been a whole sea-change since the VC has been with us

when [the VC] came there was virtually no central knowledge or control of research

New strategies, restructures in senior management and faculties, and culture change have flowed on to how the library is managed and its relationship with the research community. As one participant remarked:

the same cultural shift that was going on throughout the university, we obviously had to keep pace with that and changing from a learning and teaching to a research institution.

4.3 The library, the research community and the systems

All libraries involved in the study had undergone or were in the process of restructuring, which included assigning the responsibility for research support to specific positions or units. In most cases these restructures were supported by strategy documents, in-house working groups and training. As the libraries were at various stages of progress in relation to structures and positions, their experiences differed as to how the changes were working, or going to work in the future. For some the change in the university's strategic direction and its impact on the library had been unexpected:

there's been a lot of pressure on us as a central service to be supporting research and that had come fairly out of the blue for us.

Others were still finding their way in the strengthened research support role:

it's very early days but we are making inroads into how to contribute into the doctoral program and I think there will be much more fertilisation between the research office and us.

Often the success of implementing research support initiatives was due to the influence of an individual making a difference through their position and/or personality. Reflecting on these individuals, and the relationship between the library and research activities, participants made the following comments:

there is a clearer research strategy now coming out of [the library] and I think one of the reasons for this is that until two years ago we didn't have a head of library services

if it was now we were doing the RAE [the research office participant] would rely more on the library because the relationship we have now is very different

it's about individuals and a very good example is that until [the participant librarian] arrived I [the research office participant] didn't have anything to do with the library.

A number of the participants discussed the importance of academics and senior managers who were library supporters, expressed as 'pro-library', 'enthusiastic about libraries', and 'a big fan of the library'. These members of the academic community can influence whether library staff gain representation on research committees and increase the library's visibility across the university. Certainly, research committee attendance at senior management and faculty levels was

viewed as positive and necessary to ensure the library is aware of research strategy and the discussions taking place, demonstrated in the remarks:

we do turn up to these meetings and we do contribute, so we're not just observers, we're there

being a constituted member, a longstanding one, does mean that they do recognise the contribution that you make.

Along with the influence of people in developing relationships, institutional repositories (IR) were pivotal in bringing the library and research areas closer at four of the universities. In one participant's words, the IR "changed the playing field". The introduction and implementation of the IR, regardless of which unit had primary responsibility, led to increased cooperation and collaboration between the library and research units at the university. Established between 2006 and 2009, three of these IRs were the responsibility of the library, several with seed funding from JISC, and originally populated with bibliographic information of submissions for the 2008 RAE. The comments of participants illustrate the importance of the IR:

research support actually started from there, with the establishment of the institutional repository

the repository helped, you know the introduction of the university repository because there had to be joint working and they became more aware of what we could offer

[IR seen as] "a strategic tool of the whole university rather than a separate library project.

Holland and Denning (2011, 8 of 14) describe the "shared experience of the challenges in collecting bibliographic data" as one aspect, but the libraries' relationship with research areas were also enhanced by the interaction required to develop criteria for inclusion of content, deposit processes, ongoing promotion, and the future role of the IR in supporting research.

A more recent opportunity for the library to engage with research areas is in the development of research information systems. Three universities were in the process of implementing systems that bring all research information together including funding data, researcher profiles, research outputs, impact and esteem information. Citations to research outputs can be drawn from external sources and the IR is the obvious source of bibliographic information and some full-text of research outputs. The management of research data sets, increasingly a policy direction of large research funding bodies (Digital Curation Centre, n.d.), is also being considered in relation to research information systems.

It was evident that the position of the library in university structures and the expertise of individual library staff influenced the degree to which collaboration was occurring between the research office and the libraries in the development of a research information system. For example, at one university where the library was part of a much larger unit including information systems a fully cooperative relationship existed between the research office and the library. At another, a library staff member with data curation skills had been identified as an important

member of any working group concerned with the research information system. However, in two cases the way in which content entered the IR is going to change, which in turn could affect the amount of content (metadata and/or full-text) and has the potential to undo much of the work promoting the IR to

4.4 Collections and Services

academics.

An increased research focus has implications for collections and services that are not always appreciated by senior management at the universities. All the libraries involved in the study faced funding constraints each year and were acutely aware of the need to think creatively to reduce the pressure on building collections, usually related to the ongoing commitment for journals and databases. In the past, several libraries had been successful in arguing for additional resources, but these were most often a one-off allocation. If the allocation was for subscriptions it meant the library had to find the funding from its own limited budget in subsequent years, leading to cuts elsewhere. Support for acquiring new resources has come from the research office at a number of the universities and this illustrates another perspective on the issue of collection development; that the increased research focus presents an opportunity for the library to present its case to senior managers for additional funding for research resources.

When the participants were discussing resources, it was clear that making a distinction between teaching and research resources was not easy. As one participant commented "it's rather simplistic to view the collections of journals as research usage only". One library had examined research support in 2004, conducting a study that sought to determine the information resources needs of academics in the context of research-informed teaching (Wakeham & Garfield, 2005). In order to manage budgets and meet the needs of the teaching and research activities, the participants referred to issues, such as:

faculties must ensure that resources required for research and learning and teaching overlap as much as possible

we needed some assistance and guidance from that senior team to say do we take money from the undergraduates to support researchers or will there be more money on the table.

Teaching remains the primary source of funding for the universities, and as one participant noted, maintaining student satisfaction is "critical to the university, so still we would have to prioritise that our students have enough resources as well as the researchers". The importance of the National Student Survey was mentioned by participants or included in the documents gathered from five of the libraries, and its connection with the library is illustrated in the comment, "the library was seen very much associated with students teaching and learning".

As well as annual reviews of resource use, all the libraries relied on inter-library loans to meet the needs of academics; the cost of which was either subsidised or wholly absorbed by the library. Participants from two libraries mentioned initiatives that involved substituting journal subscriptions with fast-tracked interlibrary loans on a just-in-time basis. One library was also supplementing this

service by setting up table-of-contents alerts for academics requesting new journal subscriptions. The phrase used by two participants, "value for money", is indicative of senior management's expectations of the library and library staff expectations of their resources.

While much of the discussion about collections revolved around electronic resources and the more general observation that their increased availability led to new research support activities, the role of special collections was also raised. Two of the universities had acquired valuable archival collections, in print and other media, in discipline areas that had a strong tradition of research. These collections were seen as serving two purposes in research support activities; firstly, they provided an excellent resource for researchers currently working at the university and secondly, they attracted researchers from elsewhere.

Library services specifically designed to support research included training sessions, dedicated websites and personal assistance. The opportunity to embed library sessions in existing programs, such as those for research students, was viewed as an important target because of the extended reach they provided. In one form or another, most of the libraries had some success in contributing to these programs. Reference management, database searching and publishing were the topics most frequently mentioned as workshop sessions delivered by the libraries either as part of a university-wide program or their own programs.

When the Research Excellence Framework (REF) was in the early stages of development there was a significant role for bibliometrics and this in turn highlighted library expertise and citation resources. The use of bibliometrics in the REF has subsequently been diluted; however the initial discussion did impact on the libraries, as one participant commented:

recognition of what the library could do was given a boost when the REF was first announced and it took over from the RAE and there was this whole concept of bibliometrics.

Bibliometrics was discussed by the research office participants, in term of:

even in those areas where the REF themselves are not using citations, I think that we may well want to use citations ourselves

although the bibliometrics side of it has quietened slightly, it is still going to be there.

Despite the raised profile of bibliometrics and citation databases, several participants expressed doubts about the adequacy of staff expertise to provide services involving bibliometrics, with one declaring: "to be honest I think we are in denial about it".

A particularly innovative approach to research support services taken at one university involved conducting literature searches for researchers who logged an expression of interest to a system managing grant applications. No direct contact was made with the researcher, but they would receive, along with other research office information, a list of resources that might be of use and a brief note that further assistance was available from the library. Personal assistance from library staff, often through a liaison role or position, and specialist knowledge such as

copyright and IR processes were common to all the libraries. In addition, several of the participants had been involved in research projects at their university, either through collaborations with academics or conducting library-based studies. Others, while recognising the constraints, would have appreciated more opportunities to undertake research or participate in activities that developed their professional skills. There were also references to an intangible role in research support and that is the cross-faculty and institutional knowledge library staff gain in their day-to-day contact with researchers. In the words of a participant, the library is "seen, I think, as ... kind of neutral" and another suggested there was:

an opportunity ... for libraries to provide some kind of network where you link everyone based on their interests and experience and work and research.

At the same time, participants were aware of the obstacles they faced in achieving this role because "there are a lot of networks going on between researchers which completely omit libraries".

4.5 Future of research support

The interview discussions about research support in the past and present inevitably touched on issues that might influence the role of libraries in providing this support in the future. A number of common threads were evident in the data, including: the skills and expertise of library staff; the 'new' academic and their relationship with libraries; and the impact of changes to UK higher education policy.

Combined with an increased research focus at the universities are the unrelenting advances in technology, changing how researchers work and how services and resources are managed by libraries. Some participants indicated that library staff are struggling with the volume of information that comes with this combination. One participant noted "we all spend a lot of time keeping up-to-date" and speculated that there may come a time "where we need a dedicated research team and ... a learning and teaching team". Another concern related to the skills of long-standing library staff, whose primary role was to support teaching, as a participant remarked: "up to now yes, we were teaching focused, we were very focused on information literacy and getting all the undergraduates all the skills, trying to get in there in the first year". There were comments relating to out-dated modes of searching (Boolean logic), viewed as irrelevant to library users, and the willingness of staff to extend their skills. It was suggested that library education has a role in equipping new librarians with skills relating to research in order to "try and match up researchers' needs, things like data management", with a recognition that some library staff find "research a bit intimidating perhaps and bit kind of impenetrable".

As these universities have sought to build their research base, new academics with different ways of working and with different expectations of them are being appointed. As one participant commented:

the young early career researchers see things in a slightly different way. They ...have been hired [to] produce research, they will do the teaching, their research will influence their teaching and that's the way it will work.

These new researchers appear to be less reliant upon the library for advice and assistance, a perception illustrated in the following:

traditionally, [we] have had a very good relationship with our academics. You know, they kind of hand their students over to us and say the library will do it, whereas some of these new ones ... have a much more distant relationship with the library

they don't see the reason why they should make additional effort to visit the library and learn the databases

a few young researchers... don't realise there is any input from the library at all.

In the opinion of one participant, information technology is largely responsible for these transformations seen between long-established academics and the recent recruits, who are "more self-sufficient because of the electronic resources, and it's all desk-based".

A great deal of work is taking place at each of the universities as they move towards the REF in 2014, including the establishment of working groups, trial REFs and UoA case studies, as one participant expressed it "to see if they are REF-able". At the same time there is uncertainty about funding in the future for teaching activities, which has the potential to impact on the libraries' budget. Comments such as those below reveal these concerns:

first of all recruiting students and then retaining students and also with the increased fees and the importance attached to the national student survey

we don't quite know the impact of the fee change of 2012 is going to be

I would say funding is a bit of a concern for all universities in the UK at the moment

the next few years are going to be quite challenging with the way that our funding is in the UK.

As the universities meet these challenges, and while remaining focused on increasing research, the libraries will face some difficult decisions in relation to their collections and services. A remark by one participant on this issue may very well reflect the position of the others:

however well [the University] does in the REF, we'll still be an institution whose income is brought in by students and... it must not lose out.

Research funding in the future will be tied to research data management, and as a participant said: "data management is going to be quite big". Although data management requirements are a relatively recent initiative of the major research funding agencies, a number of the libraries were already involved in discussions, working groups, and the selection of systems to manage research data. Implementation, ongoing management, promotion and assistance in using the systems may become the partial responsibility of library staff in collaboration with research office personnel. This will necessitate the development of skills, as one participant forecast "training all subject librarians in the repository and raising awareness of research data management". Perhaps optimistically, a participant from the research office discussing research data and future REFs stated: "next

time around, when will it be around 2019, our researchers will all have been trained in proper data management, they will never have lost anything".

5 Discussion

Spanning a number of themes that emerged from this study was the importance of the institution (its processes and structures) in any discussion relating to research support offered by libraries. The focus of libraries has moved away from collections, although managing them and ensuring effective access to resources remains a significant issue. Instead, libraries have been involved in increased collaboration and cooperation with other units in their institution through institution-wide initiatives, such as an institutional repository. As research data management assumes a higher profile in the institutions, this too can provide opportunities for collaboration between the library and other units.

Moving outside the library walls, its physical space for collections, services and staff, has been occurring for many years as libraries have recognised the necessity of engaging with academic and administration colleagues. The introduction of electronic resources was in part responsible as researchers were no longer compelled to visit the library to consult resources. There is concern about how this will play out in the future, noted in earlier reports and expressed by participants in this study, as younger researchers join the academic workforce. Deem (2010), discussing aspects of management, points to the importance of 'academic credibility' to gain respect from academics. For libraries to achieve this, their staff will need to display expertise and skills that are not only respected but needed by researchers.

The learning and teaching imperatives of the participating institutions impact on the financial and staff resources available to provide research support. With the introduction of higher student fees for the 2012/13 academic year (HM Treasury, 2010), trebling that of previous years, the institutions are anxious about learning and teaching revenue in the coming years. It is highly likely that any reduction will flow on to the libraries, which would affect their capacity to maintain current services and collections. In this climate, ensuring students evaluate their university experience positively in the National Student Survey and the increased focus on research activities will be difficult to balance.

Individuals, whether by dint of their position or their personality, can make a difference in research support activities undertaken by the library. Whether it is a new VC with a remit to increase research output, a researcher who champions the library or a library staff member with the skills and expertise to engage and collaborate with researchers, an opportunity to raise the profile of the library in research support presents itself. As this paper illustrates, there are various ways libraries can develop relationships and implement research support services when pursuing these opportunities, but they have to consider how they proceed. Advances in technology, changes in government and funding agency policies, and the sheer volume of information can be overwhelming and there is a point at which the expertise and skills required to deliver services across teaching/learning and research, a role required of many library staff, is beyond the capacity of an individual. The creation of additional specialist positions may be required in the

future and while this is already occurring in some libraries, the findings indicate there are skill sets, such as bibliometrics and data management and curation, which are still under-developed.

Qualitative research methods provide a depth of understanding about a topic that goes beyond the findings available using a quantitative approach. The semistructured interviews, transcription and data analysis involved are time-consuming and require a level of immersion in the data that is vastly different to administering a questionnaire with some open questions. As a result, the scale of qualitative research is generally limited to smaller samples. In addition, the findings of this type of study may veer away from the initial research objectives. That was certainly the case in this instance, where little evidence of the costs incurred in providing research support was found. On the other hand, important issues were raised that far exceeded the expectations of the study. Conducting qualitative research is both challenging and satisfying at different stages; from establishing a convivial atmosphere during the interviews, through repeated reading and summarising of data, to gaining participants' feedback on the research findings. Ultimately it is a rewarding experience which enables the participants' words to speak, individually and as a group, to the themes that emerged from the research.

6 Conclusions

Returning to the primary aim of this study, there are a number of findings which can inform Australian academic libraries in the delivery of research support in a research assessment environment. The implications for their practices include the importance of identifying institution-wide strategies and people that present opportunities for the library to effectively engage in research support activities. Within this point is the imperative to find a way to develop relationships with younger researchers; a problem recognised but currently not resolved. Also, opportunities to collaborate in the development of research information systems by demonstrating the value of skills and expertise residing in the library are key to raising its profile in the institution. This may require restructures and perhaps the creation of positions to carry out specialised services that can feed into research support activities; it will almost certainly involve developing skills in some areas. One such area is in data management and curation, and another is in bibliometrics.

While the funding for and management of electronic resources is primary in providing collections that support research, libraries should not lose sight of the value of special and archival collections. Collections of this type contribute to the "legacy perception of library as home of knowledge" (Research Libraries UK and Research Information Network, 2011, 61) and have the potential to attract researchers to their institution. Finally, the perception of the library as a neutral or impartial player in the institution is unique and the advantages that come with this role should be nurtured to develop networks and facilitate discussions that extend the research support services already in place in many libraries.

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