Research support at the crossroads: Capability, capacity and collaboration

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Introduction

As universities respond to the changing research landscape and shifts in scholarly communications, we are seeing a transformation of the academic libraries services and support (Deng & Dotson, 2015; Haddow & Mamtora, 2017). Academic libraries' "support for research is at a crossroads" (Atkinson, 2016, p. 137), with new intersections of digital content, university research lifecycles, and international rankings.

As the volume of (and easier access to) digital content has expanded and matured, the academic library's role as the gateway or mediator of content has diminished (Brewerton, 2012). While there may be a tendency for researchers to have a limited view of the role of the library, primarily focused on procuring, organising and facilitating access to scholarly books and journals, this is no longer an accurate reflection of academic libraries' contributions to research (Atkinson, 2016; Jubb, 2016). The importance of demonstrating the breadth and depth of the library's value and contributions to the university's research agenda, beyond such conventional areas, has never been greater.

Increasingly universities and their affiliated researchers need to be able to demonstrate the quality and impact of their research outputs. In New Zealand the Performance Based Research Fund (PBRF) is a mechanism that assesses tertiary institutions' research performance and determines government funding and is therefore highly competitive (Tertiary Education Commission, 2016). Added to this is the increasing need to attract students and top scholars within a nationally and internationally competitive landscape, obtain external research funding, and maintain or improve world university rankings.

Victoria University of Wellington has responded to these challenges and opportunities with an ambitious research strategy and strategic plan. It aims to "enhance its research quality and will retain and build upon its position as the first-ranked university of the PBRF. Victoria will improve the international profile and impact of its research by increasing the quantity of top-quality research and scholarship performed" (Victoria University of Wellington, 2015, pg. 15). With the dual influences of the need to increase external research funding and improve international rankings, all universities want to understand, measure and evaluate the quality, impact, reach, and accessibility of their research and Victoria is no exception.

Victoria University of Wellington Library has responded to the University's strategies by re-positioning and developing its services, support and pan-university relationships to enable it to make a tangible contribution to the University's research endeavours.

Background

As the research landscape has changed, so too has scholarly communications. This is the backdrop for the Library's redefinition and development of services and support over the past five years. This is paralleled

by the changing expectations and responsibilities of library staff and the increasing need to work collaboratively with colleagues, pan-university (Wilson, 2017).

In 2011 the Library underwent a significant restructure with an enhanced strategic focus for supporting research. Between 2011 and 2015 the Library developed a research support strategy and undertook a study to better understand the needs of Victoria's researchers, to guide further development of research support services and staff capability requirements. In addition, access to research analytic and benchmarking tools (SciVal, InCites and more recently Altmetric) was acquired.

Building effective and productive relationships with colleagues from across the institution has been critical to demonstrating the knowledge and expertise of library staff and how they can meaningfully contribute to the University's research activities. One key way the Library has built its credibility in relation to supporting research has been by taking a lead and/or contributing to strategic University initiatives. These include eResearch capability modelling, research data management (RDM), a survey of researchers' open access (OA) publishing practices, and establishing a citation metric key performance indicator for University Council reporting purposes. These initiatives will be covered in greater detail below.

This collaborative pan-university approach has facilitated effective use of the range of skills and experiences across service units and also enabled a unified way of supporting the University's research initiatives focusing on institutional outcomes rather than individual unit goals (Wilson, 2017).

Towards the end of 2015 the Library took stock and considered what additional capacity and capabilities were needed to further enhance the work completed to that point. It was determined that there was a need to expand or develop new services related to research impact and metrics, RDM, strategic publishing and OA, and institutional research impact analysis, benchmarking and reporting.

While Subject Librarians (SLs) continue to be the primary conduit for library research support services, a new Research Support Librarian (RSL) role was created in early 2016. The RSL works collaboratively with SLs and other library staff to build capability and capacity in line with the University and Library's newly focused priorities. These include enhanced support and collaboration for research with regard to the scholarly publishing lifecycle, particularly improving the University's rankings and research impact.

Strategic initiatives and collaborations

As a result of looking outwards and building cross-sectoral and horizontal relationships within the University, library staff have been invited to comment on, provide advice or contribute to activities such as performance indicators, research impact, institutional analytical reports, ethics and research policy development, and support for research grant and funding applications. Working with colleagues across the University we promote and support the use of research metrics and analytics to better understand the position of the University within the global research landscape. These collaborative partnerships have expanded the role and perceptions of the Library in the University.

The following sections describe a range of initiatives developed in collaboration with colleagues, panuniversity.

Author identities and profiles:
Academic researchers have typically profiled their work online through institutional or personal webpages. However these often provide static content, such as research areas and publication lists, infrequently updated. Enabling and supporting researchers to maintain unambiguous identifiers not only benefits individual researchers by ensuring they have an authoritative record and persistent identifier, but is also critical to ensuring publications are correctly affiliated, as this in turn impacts upon

2

institutionallevel recognition and analysis of publications. Many publishers also now require or encourage authors to provide an ORCID iD.

A government-led, initiative promotes and enables the adoption of ORCID iDs across the New Zealand research ecosystem. Since September 2016, the Library has been instrumental in developing and executing an implementation plan, in partnership with the University's Information Technology Services (ITS) and Research Office, to encourage Victoria researchers to register for an ORCID iD. This included a communications and promotions strategy and kaitiakitanga (guardianship) of the process for promoting and managing the ORCID iD registration process.

One major promotional exercise included ORCID 'pop-ups' run by library staff in public spaces across the University campuses, in addition to promotional messaging across internal communication channels. Encouraging researchers to get an ORCID iD is promoted in library research workshops and new PhD and postgraduate student orientations. In addition, in 2017 Victoria integrated ORCID into the academic promotions process and linked ORCID iDs to the research management database. These strategies have seen an increase in ORCID registrations from 489 in November 2016 to 869 in November 2017.

Research impact and metrics:
The provision of research impact and metrics services (also referred to as bibliometrics or citation analysis) can encompass journal ranking metrics; impact metrics for scholars; alternative metrics for documenting impact; tools for assessment; and scholarly identifier systems (Suiter & Moulaison, 2015). Alternative metrics are increasingly considered a complementary method of analysing the impact of research outputs.

In 2015 the University developed a key performance indicator related to citations, to act as one of a number of proxies for research quality. Following analysis of the University's publications and citations conducted by the Library in *Scopus* and *Web of Science*, this KPI initially reported on the number of citations per publication (CPP). This did not prove to be as simple to report as hoped, due to delays in publication data inclusions in the two databases. Working with the Planning and Information Management team and Vice-Provost Research (VPR), the Library recommended replacing CPP with a fieldweighted or category-normalised citation impact measure, which was subsequently adopted. Finding a way to actually measure research quality, rather than through the use of proxies, is a challenge and major priority. Library staff are now involved in a working group formed and led by the VPR to develop a panuniversity approach to enable and measure 'quality' rather than only quantity, impact or reach.

In addition to the major citation databases *Scopus* and *Web of Science*, in 2014 the Library acquired subscriptions to their respective analytic and benchmarking tools, *SciVal* and *InCites*, and in 2016 subscribed to *Altmetric Explorer for Institutions*. These tools allow deep, intensive analysis of Victoria's scholarly impact and attention as well as the ability to benchmark against other national and international institutions, within the coverage of the databases. Over time, members of the University's Senior Leadership Team's interest in understanding the scholarly impact of publications from researchers in their faculties, schools or institutes has grown substantially. The Library provides point-in-time citation analysis of institutional, faculty, school or subject groupings and detailed reports, analysis, and benchmarking to assist with contextualising changes in world university rankings.

Support for individual researchers has focused on providing training in these tools to identify useful and relevant metrics that can be used in evidence portfolios for the 2018 PBRF assessment round. Following discussions with the Research Office (who administer the University's PBRF submission process) the Library designed and delivered workshops highlighting the use of metrics in the PBRF portfolios: how to locate metrics; which metrics the subject specific panels mention; how to interpret metrics to indicate impact; and how to cite metrics. Attendees ranged from early career academics to established

3

researchers, demonstrating that interest in understanding and using metrics was growing across the University. Library staff also work one-on-one with academic staff in research consultations and PBRF 'writing intensives' to provide more tailored advice. This wider involvement in PBRF (in addition to undertaking verification of research outputs) has opened a stronger dialogue between researchers and the Library and there is acknowledgement of the role of the Library as an adviser on metrics and scholarly impact at Victoria, complementing the Research Office's focus on broad social or economic impact.

Research data management:
Research data is constantly generated within research institutions and ensuring data is stored, managed and preserved appropriately is recognised as a priority internationally (Cox & Pinfield, 2013). RDM relates to a range of practices including "design and creation of data, storage, security, preservation, retrieval, sharing, and reuse, all taking into account technical capabilities, ethical considerations, legal issues and governance frameworks" (Cox & Pinfield, 2013, p. 2).

In 2015 the Library established a RDM working group with representation from across the University. The major focus of this group is to build understanding of RDM, evaluate practices of academic and research staff, and develop guidelines for managing research data. This involves establishing the need for RDM planning by drawing attention to best practices as well as potential pitfalls of research without good planning or an existing RDM policy or mandate.

With funding and sponsorship from the Office of the Vice-Provost Research and the Faculty of Science, in 2015 a project manager was employed to conduct a study exploring the current RDM practices of Victoria researchers. Key findings included a variety of data management practices and an expressed need for training and guidelines. Building upon the findings of the study and continuing to work in collaboration with partners across the University, our aim is to develop an RDM support service that integrates elements of education, expertise and curation for researchers (Bryant, Lavoie, & Malpas, 2017). In collaboration with ITS and the Research Office, the Library has drafted RDM guidelines and is developing an online RDM planning tool. RDM questions are now integrated with internal university funding round applications. With its pan-university, bird's eye view, and subject expertise the Library, in collaboration with the ITS Learning and Research Technology team, plans to develop a service that recognises research perspectives across all disciplines (Latham, 2017).

Scholarly communication and publishing
Borgman and Furner (2002) define scholarly communication as the "communicative activity of scholars … directly engaged in the creation of original scholarly works" (p. 6). Library support for scholarly communication includes advice and advocacy for publishing practices and tools to extend the reach and impact of research, including OA publishing (Burpee & Fernandez, 2014).

Collaborating with the Faculty of Graduate Research, the RSL and SLs have delivered workshops for postgraduate students on strategic publishing, understanding OA and unethical publishing practice, and author rights.

In November 2016 the Library surveyed Victoria's academic and research staff about their experiences with article processing charges (APCs) to publish journal articles and books in OA. While the response rate was not high, a theme of the survey results was that the lack of funds to pay APCs is becoming a barrier to publication in some high status, high impact and highly cited journals, and to OA publishing generally. Gaps in knowledge about OA and publishing options highlighted a need for further information. These findings were supported during discussions with the Associate Deans for Research initiated by the ViceProvost Research Office and attended by a senior library staff member.

4

The Library is redeveloping its institutional repository to facilitate the deposit of research outputs through linkages with the university research management database, thus providing a local, accessible green OA archive for researchers.

Researcher development programmes

The focus on research support and awareness has been growing across the Victoria research community. Although TeachBaz was an established event to celebrate teaching, until 2015 there was no equivalent for research. Developing priorities and services to better support research, the Library contributed to Victoria's inaugural ResBaz (Research Bazaar). This event celebrates the University's research community, skills, and expertise. A key priority is to grow a local community.

The RSL and one SL have been on the planning committee for the last two ResBaz and the upcoming ResBaz 2018. Committee members drawn from across Victoria (ITS, Research Office, Postgraduate support, academics, and students) demonstrates the University-wide interest in providing relevant information and training opportunities to support researcher development. The Library has presented sessions at each event covering research tools, author identifiers, and academic networking sites. With academics, post-graduates, and even external parties attending, the Library takes a key role in research support.

A recent initiative, led by Victoria's Centre for Academic Development throughout 2017, has been establishing the Victoria Early Career Academic Programme (VECAP). Within this programme, library staff contributed instruction on online analytical and social media tools, and techniques for academic research collaboration.

Capability and capacity

Internationally, library research support staff roles are shifting to better support universities driven by international rankings, research staff driven by performance metrics, and researchers accessing material online. New or enhanced services are emerging in this more service-orientated and value-added model and as a result the skills needed by academic librarians are changing.

As noted above implementation of Victoria's strategic research priorities are gaining significant momentum. In turn, this has driven a greater interest and commitment from colleagues and partners across Victoria to work collaboratively with the Library. Strong relationships and partnerships with other University service units, such as the University's Research Office and ITS, have been vital in sustaining collaborative endeavours. Regular information sharing and discussions ensure effort across these groups is not duplicated; instead there is a focus on effectively leveraging existing expertise. A further benefit from these discussions is the identification of additional capabilities, capacity or other resources that may be required, which in turn informs Library planning and staff development strategies.

The role of the SLs at Victoria has long been a classical model, where each position is allocated a subject portfolio. Until a few years ago SL support for researchers largely focused on ensuring collections met researcher needs, providing training and support for reference management software and the discovery of information resources and literature. While these services continue to be important, responsibilities have evolved to encompass information and advice about publishing and copyright, author and publication metrics and attention, RDM planning, and author profiles and identifiers. Until recently, the extent to which SLs developed the requisite knowledge and experience was ad hoc and dependent on personal interest and development. There was no formal training or development programmes in place to grow research support knowledge and skills across the team.

A more recent strategic priority for the University has been to develop services and tools to support RDM. To enable RDM services to be developed and sustained, we first needed to prioritise developing library staff knowledge and experience. One of the first responsibilities of the RSL after appointment in early 2016 was to co-ordinate Victoria's involvement with the Australian National Data Service's 23 (research data) Things programme. Interested staff from the Library and other University service units were invited to participate. In addition to the online, self-directed training programme, monthly community group meetings were organised for participants throughout the year where staff shared their experiences and knowledge. This established a community of interest among library staff and built understanding of the practices and issues regarding the management of research data.

Since then, the development of SLs' skills and knowledge has continued to be proactively supported through information sharing and updates, team wide training initiatives, and co-leading research support sessions. This is reinforced by involving SLs in responding to University's Senior Leadership Team requests for citation analysis, institutional benchmarking, and analysis of existing and potential international collaboration.

This collegial approach to learning and development has built confidence in SLs who are able to advise on citation and alternative metrics and their applicability to different disciplines, the importance of unique author identifiers and accurate affiliations, and ways to publish for impact and avoid predatory publishers. They advise researchers through consultations, workshops and online resources.

As services and responsibilities have expanded, we have also needed to confront the challenge that many libraries are facing globally. Academic librarian roles and responsibilities are increasingly expanding and adjusting, or new types of roles created, without reduction of other responsibilities to enable new services to be delivered, or the development of new skills and knowledge (Miller & Pressley, 2015).

Therefore, in order to ensure that research support services provided by library staff are able to evolve sustainably, we have needed to identify workflow efficiencies particularly in relation to collection development and evaluation. The Library's approach to collection development is now largely automated through DDA, EBA, frontfile purchasing, and approval plans, reducing the need for individual title selection. Evaluation of physical collections is shifting away from extensive consultative and title-by-title assessment to using usage data, return on investment, and other defined parameters to provide an overarching approach to collection management.

It stands to reason that in this changing environment the Library considers its structure and focus, and whether these continue to allow for a responsive, proactive approach that clearly aligns with the University's strategies and priorities. As Hoodless and Pinter (2016) note, the notion of whether a subject-based, mixed or a functional structure best serves academic libraries has been considered for some time and we have also been contemplating this question.

It is within this context that in November 2017 a Library change proposal was released. The outcome of this proposal is that while retaining the SL team, a complementary functional team, Research Services, is planned. The formation of the Library Research Services team expands the number of RSL positions to two and brings together roles with the responsibility for managing and preserving both digital and physical special collections. Key drivers for this change are to enable greater capability and capacity in relation to research services, and to better align with the growing emphasis that the University places on it (Hoodless and Pinter, 2016). It is anticipated that SLs will continue to play a key role in research support, particularly in relation to researchers in their subject areas. This further aligns the library's structure with the trend noted by Jaguszewski and Williams (2013) of a hybrid model where researchers are supported

by both subject and functional specialists. Critical to the success of this approach will be strong communication, ongoing and integrated workforce development and training, and clarity of responsibilities and referral processes.

Conclusion

Positive progress achieved through collaborative partnerships across the University and disciplines has extended the development of staff knowledge and skill sharing to achieve common goals in supporting researchers, and providing analysis and reporting on the University's institutional targets and performance indicators. A focus on creating greater outreach has enabled new services to be established and implemented through pan-university relationships and partnerships. Collaborations include ITS, the University's Office of Research and Academic Development, as well as across and within the Library.

Over time, the scope of the Library's contributions to the University's research aspirations has grown and this is reflected in: the development of its services and support; additional responsibilities for the SLs; and the creation of the RSL role. These developments have been matched by increasing interest and demand from the University community for the Library to deliver research impact and citation data with corresponding evaluation and analysis. In addition, there is an increasing need to offer support and advice on a broad range of research topics including new publishing models such as OA and RDM. This reflects the shift in the research landscape which is paralleled by changes to scholarly communications and its corresponding support (Deng and Dotson, 2015). Therefore it is critical that the Library adapts to these changes and continues to develop its capacity and expertise to enhance and deliver relevant services which clearly align with the strategic drivers of the University.

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