Libraries and Research Support in small and teaching-led universities: contextual problems around nascent services in dynamic times

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Introduction

In recent years, many academic libraries have been developing research support services. Much of this development has emerged in response to the increasing demands and mandates from research funders to, for example, manage research data more effectively and to make research publications openly available through either gold or green open access (OA). The exciting prospect of helping to transform research practices by ensuring that transparency, accountability, and reproducibility are all present has also demonstrated a number of complexities and problems for research support services. In this paper we will discuss some of the challenges and opportunities for libraries to substantively engage in developing research support services for their parent higher educational institutions (HEIs) and the wider communities they serve.

It seems reasonable to state that the volatile political and economic environments that contemporary HEIs currently operate within in the U.K. are unlikely to rescind in the immediate future. The newly proposed Office for Students (OfS) is set to act as a public body to regulate the 'market' of higher education in place of the Higher Education Funding Council for England (HEFCE) and the Office for Fair Access (OFFA). The OfS is likely to bring about significant changes to the landscape of higher education in England, adding to existing pressures. However, such changes are not, per se, new within the contemporary paradigm. As McGettigan (2013, p.1) notes, the government is not simply implementing sweeping amendments 'driven by temporary difficulties; […rather] austerity is the occasion which makes the prominent changes more acceptable politically: 'there is no alternative''. As such, this volatility can be seen as a part of a governmental continuum, and this means that universities and their library services are facing greater uncertainty in the immediate and mid-term future.

A range of instruments have and are being implemented by the government in order to support its agenda for higher education and research. The recent introduction of the Teaching Excellence Framework (TEF), the metricisation of universities, and the impact of this upon student recruitment are all significant for any HEIs' library. Adapting to this fiscally insecure operational environment is already a significant challenge for all U.K. universities, as too is budgetary planning for library services. The exit of the U.K. from the E.U. will add further uncertainty, in terms of oscillating inflation rates and more general political turmoil. The impact of these variables upon smaller and teaching-led institutions, which demonstrably have fewer and less diversified income streams than large and research-led institutions, is even greater.

All of these environmental changes are occurring during a period in which many smaller and teaching-led HEIs are developing their research strategies and growing postgraduate research programmes. Such initiatives are often instigated to develop an institution's profile, mature,

and grow. This development is often intended to provide greater stability within the dynamic environment, and offer broader scope for HEIs as per the more established and larger research-led institutions. Within this context, we can broadly understand research as 'the pursuit […] of knowledge and truth within an ethical and democratic institution' (Budd, 2009, p.5) for HEIs. Libraries have been key stakeholders in driving compliance with aspects of this work, such as assisting with funder OA policies, devising and leading with research data management (RDM) practice, and explicating good practice around some of the technical architecture of the contemporary research and scholarly communications processes. The wider context needs to be examined in order to assess how libraries can support the development of research, and whether this support is sustainable.

The development of library services for research support

Libraries have offered skills and knowledge to assist their institutions with the significant challenges posed by wicked problems- problems that are 'highly resistant to resolution' (Australian Public Service Commission, 2007). These 'wicked problems [exist] because of the greater interconnectedness of organisations and processes in a globalising world, p.1' (Awre, et al., 2016). As libraries traditionally span the breadth and depth of an HEI's core activities, intersecting with teaching, learning, and research activities as a core service, this extensive point of contact with stakeholders offers them a unique set of positions and access points to problems and solutions. These aspects also reinforce a library's self-awareness regarding their multiple functions and purposes, and assist a focus on serving the needs of their communities of users. This is particularly significant in the contemporary environment due to the increased institutional orientation around the National Student Survey (NSS), TEF, league tables, and other metrical analytical methods of 'measuring' a library service's contribution towards institutional success.

As such, the current environment in U.K. higher education clearly offers its own challenges and opportunities for the development of research support services. The primacy of the Research Excellence Framework (REF) exercise in the minds of research support staff and senior academic managers means the focus on funder OA mandates can slow the progress of, for example the RDM agenda, which is much more distributed and nuanced then OA, requiring locally coherent agendas that consider the various 'Influencing Factors' (Pinfield, et. al. 2014, p.18). However, some of the processes and tools deployed by libraries to fulfil OA requirements (advocacy, multi-stakeholder collaboration, repositories, etc.) could prove to be transferable to RDM workflows. It is important to be clear that OA does not equal open data or data sharing: there is a danger that these can be conflated as often the same library team, or even individual, is responsible for OA and RDM at an institution (Pinfield, et al., 2014). Conflating access to publications and research data is likely to add further resistance from researchers that need to protect their data for completely valid reasons, such as protecting the privacy of human participants.

With a scarcity of budget for developing, curating, and maintaining library resources for research support, and the experiential deficit regarding some of the specifics of libraries collaboratively supporting research activity, the challenges for small and teaching-led HEIs for developing research support services is significant. In this paper, we will discuss some of the challenges and opportunities for libraries to substantively engage in developing research support services for their parent HEIs.

Challenges

Research culture

Research activity has always been a core function of the academe. However, the distinct histories of U.K. higher education have produced an unequal distribution of research activity across the sector. The historic universities of Oxford, Cambridge, and the red brick universities of the 19th and early 20th Centuries dominate the research activity, with the 24 Russell Group institutions being mobilised by the receipt of 77% of the total RCUK funding in 2015/2016 (Russell Group, 2016).

This distribution of research funding has created a patchwork of research activity across institutions. At the smaller and teaching-led institutions, there are often pockets of research specialities and excellence, but this work often takes places on the margins of the academics' workload. As such labour is commonly not a historic part of the core mission of such institutions, often not sufficiently accounted for in the workload planning exercises of a university, calcifying the marginal status of research activity outside of the Russell Group. This is not foregoing the wider political climate which has fostered 'complex labor processes, human hierarchies, discipline, sometimes bizarre management regimes of control and motivation, conflict, weariness, and often suffering' (Willis, 1999, p.142) upon some academic staff.

By its very nature, research is a discrete and complex task, requiring time, planning, experience, and access to various resources and apparatus as required. Kuhn (1970) notes that this type of scholarly activity can by led 'by a new paradigm [where scholars] adopt new instruments and look in new places […and] see new and different things when looking with familiar instruments in places they have looked before' (p.111). This framing of research implicates recursive cycles of activity, which overlap discursively and eventually contribute to knowledge within a discourse (Foucault, 1972). This is significant because the emphasis is moved away from individual researchers to the wider social and cultural context from which the research itself emerges.

Fostering positive and active research cultures is a difficult challenge for smaller institutions, where the complexity of the contemporary research active environment has been obfuscated through its marginalisation. Libraries often introduce support around policy areas in terms of research outputs to move towards compliance with, for example, HEFCE, RCUK, and Wellcome Trust policies, and also with the emerging research data policies that are becoming common place. Unfortunately, the library is often not represented during the decision-making processes that govern research activity within HEIs, and thus gaining tacit political power within the HEI is particularly challenging for library workers and libraries that support research.

Experience, skills, and responsibility

The deficit of experience and resources to help manage the administration of such nascent aspects of research activity and scholarly communications within the context of a deeply hierarchical structure can make this a difficult responsibility for libraries to manage, as 'the rigid structures are pervasive [and] these structures in turn set a precedent for how our library services engage with our readers, patrons, or users. They enforce behaviours and condition us'

(Sanders, 2016). As professional services rather than faculty, a library workers' access to the decision makers within a university, a faculty, or department may be inadequate to get academics to buy into the open scholarship agenda and the related better practices. Indeed, the proliferation of professional managers and administrators across the HEI may even make the process of explaining the research processes, its costs for the library, and the digital dissemination of an output under an appropriate licence more difficult to colleagues that do not have a background in academic research.

Libraries and research offices have taken the lead in RDM policy development, involving various groups of stakeholders in the implementation and governance of services (Cox et. al. 2017). The logic behind this can and should be scrutinised, and questions around the ontological premise that the academic library is the most appropriate home for research data services (RDS) need to be fully considered. The co-ordination of disparate institutional functions-- such as the library, research office, and IT—towards designing and implementing a comprehensive RDM service that coherently meets the needs of the academe has to take into account a multitude of working cultures and practices. Some agility in terms of strategy and decision-making could be advantageous: a small HEI might indeed consider themselves well-placed to achieve this, as long as commitment from senior figures in the institution is acquired alongside an understanding of research across the lifecycle. As Knight (2015, p.425) identifies with regard to the London School of Hygiene and Tropical Medicine, '[t]he institutional environment has a significant influence upon the approach taken to provide Research Data Management Services within the institution'.

It is also worth considering that, in a relatively nascent area of development for academic libraries, there can exist a misalignment of library managers' views of RDS practices in their service and the perceptions of library workers themselves as 'more library directors believe they offer opportunities for staff to develop RDS-related skills than the percentage of librarians who perceive such opportunities to be available' (Tenopir et al., 2014, p.84). This misalignment can be further exacerbated as 'most LIS professionals do not necessarily have a personal knowledge of research; another difficulty is simply the lack of knowledge of the extent of the issues, since they relate to the work of every researcher in an institution, but disciplinary and sub-disciplinary differences make generalisations about data practices very hard' (Cox, et al., 2014, p.43). This lack of familiarity with research practices across disciplinary divides is a highly significant challenge for those supporting research.

Research support and subject librarianship

Burke (1974) conceived research as a conversation in a parlour between various researchers throughout time. However, there is an unfortunate risk of libraries offering a certain level of dissonance to this conception of research; academic liaison and/or subject librarians regularly discuss issues around resources for taught courses and delivering information literacy sessions. As such, handling queries around resources for research activity and training sessions for PhD students can be an area of contention, with different library workers being misidentified as the appropriate point of contact. Ensuring the skills and experience of *all* library workers is clearly the most efficient way to support research. However, the ability to easily identify and access the relevant library workers is clearly of benefit to ensure that the services delivered are consistent.

It is important for library workers involved in supporting research to help researchers to be aware of and to advocate for participation in alternative publication methods, using

repositories, and selecting appropriate licensing options (Lawson et al., 2015). The potential extension here of critical information literacy into research support highlights that the different aspects of library service provision are not in competition with one another, but can open a space for collaboration and synthesis. This approach helps to unite the disparate services of supporting teaching and learning and supporting research. Developing criticality in research and scholarly communications practices aims to 'avoid assumptions of a reductive liberal individualism at its root and take into account the unavoidable constitutive aspects of relations with others, discourses, and social context' (Nicholas, 2012, p.243). However, within the institutional context, professional services often function as passive institutional conduits: for professional services to take on active roles in the domain of research and scholarly communication challenges certain social constructions and hierarchies, and as such requires sensitive planning.

Resources

Similarly to institutional labour being organised around the primary business of teaching, the budget for library resources has commonly been devised around the need to provide resources to support taught courses, increasingly through reading list software solutions such as Talis or Leganto. This is a perfectly sensible rationale in that it helps to create a link between the lecturer and the library collection that supports their course, yet it can create unforeseen consequences where the research activity undertaken at the HEI uses the literature purchased or subscribed to from budgets designed around the teaching & learning functions of the institution; in practice, the provision of information resources for research activity is parasitic.

In the past, where research wasn't necessarily fiscally accounted for as a distinct activity by the library, there was a reasonably symbiotic relationship between teaching and learning and research functions. As HEIs want to develop their research portfolios, developing a strategy to increase budgets to account for an expansion of research collections can prove difficult, as this cost has no historical record within the budget. In the realm of journal bundles and Big Deals, this is particularly challenging as disambiguating what is a 'research' cost and what is a 'teaching and learning' cost is, at best, an unwieldy and possibly arbitrary estimation.

Failing to reflect any planned growth in research and postgraduate cohorts within the budget might prove politically naive, as libraries are inherently political (Jaeger & Sarin, 2016), and libraries would benefit from explicating the political economy of institutional activities and our role in supporting that in order to provide transparency, accountability, and to enable more salient planning in the future. With budgets under strain, appearing to 'do more with less' plays into a dangerous neoliberal narrative that normalises budget decreases and provides evidence that libraries can operate when underfunded. Given the volatility that tuition fees and student numbers have brought to the sector, the library's support of research activity through informational resources from scarce and dynamic sources is likely to not only prove difficult to sustain, but also difficult to map to research activity through anonymised usage statistics.

This is not an exhaustive list of the challenges that face research support for small and teaching-led HEIs, but it does indicate the level of complexity and nuance that such institutions and libraries face.

<u>Opportunities</u>

Sharing expertise across communities

In lieu of local experience in supporting research, and detailed knowledge of the current funder mandates for RDM and OA, the importance of communicating with those of experience cannot be overstated. There are many highly active professional communities that intersect around technological developments to support scholarly communications, OA administration, publication, repositories, research data management, and preservation. In addition: mailing lists address a gamut of issues and challenges facing those engaged in research support; there are regular local, regional, and national meetings around specific aspects of research support such as RDM and repository development; regular blogs, and continuous social media descriptions, commentary, and analysis. The engaged and open sharing of collective experience very much functions to mobilise the community to enhance the administration and scholarly practices at local institutions.

Engaging in trans-institutional groups allows participants to absorb some of the experience that has arisen through coordinated, pan-departmental engagement in research support. It is essential to share the complex nexus- that is still growing- that research support offers. A library service cannot possibly drive cultural change towards full open scholarly practice, mandate compliance, technical implementation, training, advocacy, output and data repository maintenance, and so forth. And neither should we. Working in partnership with the other related departments, utilising their skills and expertise to forward the institutional and scholarly advancement that research support offers, opens this dynamic area to the stakeholders that can help to share responsibility and craft a sustainable, transparent, and accountable system for research and research management.

Embed processes in policy and procedure

Developing and embedding policies in practice requires the research support function to identify the most appropriate points of access to institutional power. This is necessary to implement positive and productive strategic changes in support of research in collaboration with senior colleagues. Interacting with decision making power can help to enhance open practices by amending structural processes so that individuals are able to positively influence ethical decision making processes within organisations (Trevino, 1986). An example of influencing positive procedural change can come at research ethics sub-committees. Ensuring that Data Management Plans are within the standard processes, and by making explicit reference to the storage and preservation aspects of research data, the institution will engage in practices that reinforce better practices of transparency desired by research funders and by communities outside of the academe. Using some of the institution's apparatus and acquiring the buy-in of the senior members of the research community who administer this power will help to foster stronger reputations for individual researchers that follow the amended procedures, and for the institution that has implemented them to effect positive change.

Minimising coercion through mandates is essential. Whilst they have proven effective in increasing the volume of OA material that is available, mandates can obfuscate the very positive attributes that open scholarly practices offer for them, and there is a 'risk that it becomes perceived as a pointless bureaucratic exercise' (Tate, 2016, p.114). Finding ways to incentivise engagement with contemporary scholarly practices is important. If the researcher

is actively choosing to *do* their research in a different way, it moves away from a process of administrative compliance to engagement with the underlying issues. Developing good professional relationships with active researchers and research coordinators that often comprise research committees helps to ensure that academics engage in open scholarly practices of their own volition, rather than because doing so is mandated. If research support is to assist in moving academic culture beyond the reproduction of the existing conditions which are unsustainable for HEIs, this seems essential. This enhancement to research practices supported by library interventions helps academics, and the academe in general, to make contemporary practices part of a new commons and a public good that engages audiences beyond the academe, rather than merely administering research outputs as a funding requirement.

Change as a continuum

Deviating from the historical processes challenges the status quo, and as such can yield tensions. We must emphasise that the status quo is not neutral. In much the same way that the development of journals affected researcher behaviour and processes, that 'two-way interaction is set to *continue* as new technology and the shifting priorities of research funders allow new iterations of a centuries old tradition' (Prosser, 2013, p.49, our italics). This helps to emphasise that although change may be slow, it is a process that researchers have always been a part of.

The common conflation of related but discrete areas, such as OA and open data, could also contribute to faculty questioning whether academic freedom is being infringed. Although funder mandates have helped to drive the OA movement in universities, there is a complex internal and external regulatory environment to comply with, and institutional policy and practice could be perceived purely as tools of the REF, rather than enhancing a culture of good research. As Johnston (2017, p.14) points out, 'Not all OA policies are created equal in terms of their potential tensions with academic freedom. Academic freedom itself is complex in nature and includes aspects of negative liberty or freedom from external constraints and positive liberty or individual autonomy.' Devising OA and RDM policy requires an understanding of, and empathy for, academic freedom. In small or less research-intensive institutions, funder mandates may have a less direct impact, but may still influence policy either aspirationally or to replicate what is seen as good/accepted practice: the primary challenge is not so much achieving compliance, but rather the cultural change that would facilitate that.

Anecdotally, there seems to have been significantly smoother progress of open scholarly praxes with PhD candidates and Early Career Researchers (ECR), who may be less entwined within the systems and practices that legacy scholarly communications systems are based upon. As such, liaising closely with PhD candidates and ECRs can yield faster and more enthusiastic results as they are more enthusiastic to use pre-print repositories, to see data as a research output, and to comply with institutional policies regarding use of the repository. However, progress needs to be and can be made across all researchers, each of whom are likely to feel some pressure to support the status quo; using legacy models of scholarly publishing is often thought of the easiest way to develop one's academic career and reputation. However, the newer models of pre-prints and open data sharing are proving fruitful for some newer academics in various fields, and library research support services can demonstrate and share the successes that have come from working towards alternative forms of scholarly participation.

Costing progress

For library workers, it can often be important to remember that our emerging support of research is still embryonic (Cox et al., 2014). A significant part of the challenge is resourcing the ability to support the growth of research capacity, software, and systems that are all required to meet the emerging researchers' needs. Demonstrating that additional research activity will require additional funding for resources and systems is relatively simple, but appealing to senior management and administrators that work outside of research support and the library can be a significant challenge. The misconceptions around web-based access to scholarly information and resources can be a significant barrier, but the fact remains that increased funding is an essential facet of developing research.

Costing the resources that support identified areas for research growth, and asking for such costings to be considered during the planning of research centres and PhD programmes, are essential. This undertaking will help to build the case for increasing library funding to proactively support a growing research corpus. Some material difficulties can be overcome by sharing the weight of our challenges across all affected services. Developing effective partnerships and working practices with, for example, the Research Office, can help to resolve complex operational problems in the processing of data and managing research grant applications, and also to amplify the case for enhanced funding for research infrastructure, such as a current research information system (CRIS)**.** Ultimately, senior management need to understand that the cost of developing research activity requires ongoing support financially and politically.

Research support redux?

Libraries' enthusiastic participation in supporting contemporary research praxes and scholarly communications has diversified the role of the library within the institutional context. The complexity of the contemporary environment, from the level of research funder policies to the direct efficacy of turbulent global economics, cannot be underestimated. Libraries have a significant role to play in the challenge of developing research support services in small and teaching-led institutions to help grow and develop that institution.

The complexity of research support, even in small institutions, means that a greater range of services are required at various stages of the research lifecycle. However, the necessary skills are not consistently available (Cox, et. al., 2017). The burden of effort for delivering such a diverse set of services often falls upon individuals or very small teams. The Digital Curation Centre (Whyte, 2015) found that two thirds of institutions had less than 1 FTE allocated to RDM, with a marked gap in staff provision between 'research income rich' and 'research income poor' institutions: the most financially secure third expect to have almost three times the volume of support of the poorest third.

The effectiveness of advocacy and advisory services is curtailed when one dedicated RDM staff member needs to tailor their approach to a range of discipline-specific milieu, which has consequences for researcher engagement. There is a reliance on external sources for increasing library practitioners' skills in RDM, for example through conferences, workshops, webinars and so forth (Cox, et. al., 2017). For small or specialist institutions, collaboration with peers on centralised or shared services might be a solution for delivery of technical infrastructure and systems. Efficiencies, knowledge-sharing, and economies of scale could be

leveraged more easily than individual innovation alone to reach service maturity, especially as small universities are under pressure to show that investment in infrastructure is allocated in the right places (Knight, 2015).

<u>Conclusion</u>

There are significant barriers to libraries at smaller and teaching-led HEIs effectively supporting research. The wider political and economic pressures that affect HEIs should be given greater prominence within the context of libraries, and in particular to their impact on research support.

The insular operational cultures and practices that have evolved across the academe, including its libraries, require positive development and enhancement in line with the publicly accountable and democratic principles which they exalt. The dynamic and challenging political environment has produced a context where collaboration between various support members and teams is not only expedient, but essential to bringing together the necessary skill sets from across the library community.

The material challenges around culture, budget, skills, and labour can only be resolved through open, direct and honest participation in a dialogue that aims to foster meaningful solutions to the issues affecting research and research support. This will provide a greater opportunity for libraries to positively contribute towards the growing research agenda for small and teaching-led HEIs. Furthermore, it can aim to create greater stability for the parent institution as we move towards the further challenges that lie ahead for research and higher education in the U.K.

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