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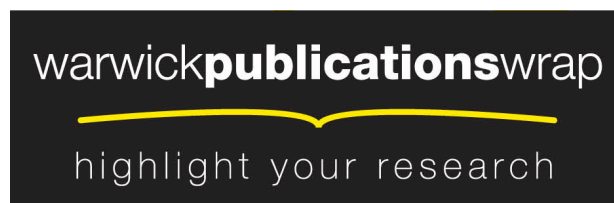
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Developing research support

A report on the RLUK project to map the information needs of researchers onto tasks to be undertaken by subject librarians and other staff, now and in the future

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Research Libraries UK (RLUK) has just issued *Re-skilling for research*, a report on its recent project investigating the 'subject librarian' skills sets required to effectively support the information needs of researchers in the current and future research environment.[1]

As the project director I have been very closely involved with the investigations.

As a practitioner, I have already found the project to be extremely useful. In my day job I am responsible for the strategic leadership of academic services delivered by Warwick University Library. My division comprises Academic Support Librarians (our 'subject librarians'), the Learning Grid (a peer-supported service for students), the Teaching Grid (a developmental facility for teaching colleagues), the Academic Services Development team (my 'research and development' team) and a research support wing which is responsible for (amongst other things) delivering and developing our Research Exchange service. This last team is in its infancy and we have been developing services pretty much in tandem with the RLUK project, which has helped to inform my thinking and helped me to assess the 'research support' options available to us when it comes to extending our portfolio.

But as a professional, I feel this is a hugely important piece of work for academic libraries more widely. From my preliminary investigations (see below) it became clear that developing support for our researchers is a big issue for our sector. Their needs are becoming more pressing and our

vice-chancellors are making research more of a strategic priority. We as librarians want to develop our offerings but we are not sure what we need to do. And as the options become clearer for potential service enhancements, we are not sure what we should do next. This is the message I am getting from responses to surveys, feedback to our project website, comments at conferences and concerns raised when visiting other libraries.

This article gives an overview of the RLUK project, its background and potential uses. It is a 'taster' of a far more detailed piece of work which RLUK hopes will help colleagues start to address some of the issues we all face in supporting our research communities.

The RLUK project grew out of work undertaken by the RLUK Workforce Think Tank to help staff develop their skills sets to support the changing needs of researchers.

The aim of the project was 'to map the information needs of researchers onto tasks to be undertaken by subject librarian / information specialist / liaison staff ["subject librarians" for short in this article] and to develop the skills sets of existing staff to ensure they meet the needs of a constantly changing research environment'.

Starting with researchers' needs was key to the project. Preliminary investigations into job descriptions[2] had shown that attempts to provide support for researchers often started with traditional subject librarian activities with a few mentions of 'research' added. This approach was hardly meeting researchers' needs. We needed first to understand these needs better and then to build support activities around them. We needed to start afresh.

Areas of Investigation
As stated in the Invitation to Tender (November 2009), the project would focus on four main areas of investigation:

1 A review of subject librarian roles
I had undertaken the review of job descriptions (noted above), and Sally Earney had previously carried out a literature review for the RLUK Workforce Think Tank. Although these studies were useful, we would be the first to admit that they were 'snap shots' and that more comprehen-

sive reviews were needed, covering not only the UK but also North America and Australasia.

2 A review of the skills sets required to support researchers
The key area of the investigation was to review the literature (from the UK, North America and Australasia) to assess the information needs of researchers and develop a model around this. The skills required by subject librarians to support researchers could then be defined and mapped against it. A gap analysis could then be conducted to identify training and development needs for subject librarians.

3 A review of relevant training and development activities currently undertaken in the sector
A review of training available for both new entrants into the profession and (more significantly) existing professionals would show developmental support currently available and also highlight gaps in training provision that could inform future activities for individual higher education institutions (HEIs) and the profession as a whole.

4 A review of alternative models of information support available for researchers
The investigation would also touch on alternative routes for providing support for researchers. Some of this may be by-passing the subject librarian model *within* the library. Some (more worryingly) may be by-passing the library altogether.

Methodology

RLUK put out an invitation to tender, covering the points outlined above. We were fortunate to be able to employ Mary Auckland to work on the project, commencing in June 2010. Mary carried out four work packages (see report, section 1.3) covering the areas of investigation outlined above:

Work Package 1: a review of researcher needs and subject librarian roles
Central to the project was an exploration of the information needs and information-seeking behaviour of researchers, and the role of subject librarians in supporting them, mapping the role of subject librarians to the needs of researchers. This involved an environmental scan of 'subject librarian' job descriptions, staffing structures and models of researcher support, and a short questionnaire sent out to 23 libraries.

Work Package 2: a review of subject librarian skills sets

The first step was to define the knowledge and skill sets required by subject librarians to support researchers based on the information gathered in Work Package 1. The next was a validation of current and future relevance of the knowledge and skills sets identified and analysis of the extent to which subject librarians and their managers think the skills are currently available. This information was gathered using a review of the current literature and a questionnaire which was completed by 22 RLUK member libraries.

Work Package 3: a review of training and development currently available for new and existing professionals

Mary used desk research, a survey of UK library schools and a short web-based survey of training suppliers to investigate current training opportunities for subject librarians and the gaps between provision and needs.

Work Package 4: a review of alternative support models

Experts in the international LIS field were approached to obtain intelligence of alternative models of information support for researchers and implications for the profession.

Findings

Whilst undertaking this project we became increasingly aware of just how important this work was to the profession (see report, p. 8). The themes investigated are of international significance, with LIBER, [3] OCLC[4] and ARL[5] doing work in this area as well.

The timeliness of the work was also reiterated. The common response to my job description study – 'please let us know the outcomes as we are struggling with this too' – was even more pronounced with this investigation. Every time we sent out a questionnaire we had queries about when the report would be available. When I (belatedly) put up a project web page I immediately received emails asking for more information. Conference papers updating colleagues on the project and training events at individual HEIs elicited similar responses.[6]

So what were our headline findings?

Supporting researcher needs

As mentioned above, we wanted to start out by articulating researcher information needs and then mapping subject librarian support activities onto these needs. How best to do this, though? We chose to do so by using a 'research life cycle' approach.

From reviewing the literature Mary established a 13-step model:

1 Conceptualising new research, developing proposals, and identifying funding opportunities
2 Seeking new information
3 Information management
4 Data collection
5 Data discovery, management and curation
6 Sharing, discussion, online collaboration
7 Analysing and reflecting on information and data
8 Writing up and dissemination
9 Compliance, IP, copyright and other statutory requirements
10 Preservation
11 Quality assessment and measuring impact
12 Commercialisation
13 Using emerging technology

Of course, this is not linear, not even cyclical and not always in this order; emerging Web 2.0 technologies, for example, enable us to extend the conversation about research via blogs and wikis but they can also be used to enhance many of the other points that precede it on the list; however, this approach gives a working order to this often complex process (see report, section 2.3).

So what are we doing as a profession to support these 13 steps?

From reviewing the literature and surveying colleagues we found:

Areas of extensive activity and support

The areas where we identified the most activity were around supporting researchers with (step 2) seeking information and (step 3) managing information retrieved. This is the 'traditional' subject librarian domain, so this is perhaps unsurprising (see report, sections 2.3.2 and 2.3.3).

Elements with little engagement

From the research undertaken there was little mention of steps 1, 4, 7 and 12. Perhaps this is understandable (how comfortable would many of us feel about giving advice on commercialisation?) but at the same time each contains an information element that we should not ignore (see report, sections 2.3.1, 2.3.4, 2.3.7 and 2.3.12).

Areas where we are beginning to get involved
Subject librarians and other colleagues are finding opportunities around data management, facilitating collaboration (a key theme for us at Warwick), providing advice on publishing and raising impact, support with copyright and other compliance issues, preservation of research outputs and the promotion of relevant new technologies (see report, sections 2.3.5, 2.3.6, 2.3.8, 2.3.9, 2.3.10, 2.3.11 and 2.3.13).

This latter group includes many potential 'next step' activities, and for colleagues looking to extend support to their research communities this might sensibly be the best place to start. The report includes many examples of good practice which could prove useful in this regard, and the research life cycle provides a useful model for brainstorming strategic priorities for individual HEIs.

DEVELOPING OUR SKILLS SETS

But do we have the skills sets to take up these opportunities? Another aspect of the study was to audit the skills needed by subject librarians now and in the future and to assess areas where we as a profession need to develop skills sets.

A questionnaire outlining skills was sent out to RLUK member libraries. The original list of attributes was very long; Mary and I felt that this might be too daunting and that questionnaires would not be completed. However, we did not wish to lose the richness we were hoping to receive in our feedback. In the end we came up with 32 skills and knowledge areas, some of which were generic but the bulk of which were focused specifically on researcher support. The 32 areas covered:

- information literacy
- information management
- subject/discipline understanding and knowledge of tools/sources
- partnership building
- the research process – both generic and local knowledge
- research data management
- metadata and research data
- issues around scholarly communications
- funder mandates, assessment and other 'legal' requirements
- Web 2.0 and other emerging technologies relating to researchers.

I am pleased to say that the questionnaire did not prove off-putting and we received 169 respond-ents from 22 institutions. 61% were from subject librarians and the rest from managers or allied staff (for example, institutional repository staff) (see report, section 3.2).

Responses very much mirrored the findings related to the research life cycle. Nine skills were identified by colleagues as being important now and likely to be increasingly important over the next five years (see Fig. 1). These largely relate to seeking information and managing information and are arguably the activities subject librarians feel most comfortable with and most able to carry out (see report, p.37).

1	Excellent knowledge of bibliographic and other finding tools in discipline/subject
2	Excellent skills to design information literacy training (both face-to-face and online)
3	Outstanding skills in information discovery, literature searching, etc.
4	Knowledge to advise on citing and referencing, and the use of bibliographic management software
5	Ability to proactively advise and market appropriate library services to researchers
6	Good knowledge of data sources available in the discipline/subject
7	Excellent knowledge of content (in all relevant media) available to discipline/subject
8	Awareness of current and changing local research interests
9	Ability to gain an appreciation of individual researcher/project needs (including listening skills)

Fig. 1 Nine areas of increasing importance over next 2 – 5years

As a profession, we seem to feel we do not need to develop the skill sets to support the areas with which we are not currently engaged (fig. 2).

1	Knowledge of sources of research funding to assist researchers to identify potential funders
2	Deep understanding of discipline/subject
3	Ability to synthesise, analyse and provide digests of 'discovered' information
4	Ability to advise on the preservation of project records

Fig, 2: Four areas unnecessary now or in the future?

Although other bodies on campus may advise on the first point, there are still information (or compliance) issues with which we may wish to be involved. The second point indicates that we do not see the 'PhD Librarian', more commonplace in the US, becoming the norm in the UK. Cura-

tion of records (the fourth point) was not seen as important. The point that really surprised me was the third point: so we won't be tweeting digests of reports linked to a URL to our researchers in the near future? As a profession, we may want to reflect on this (see report, p. 39).

However, in many ways the most interesting finding relates to some of the areas which look most attractive for developing our service portfolios. Nine skills were identified as areas of relatively high importance but areas where our skills are lacking (Fig. 3). Although we recognise the potential we often feel we are not equipped to grasp the opportunities being offered (see report, p. 41).

1	Ability to advise on preserving research outputs
2	Knowledge to advise on data management and curation
3	Sufficient knowledge to support compliance with the various mandates of funders, including open access requirements
4	Knowledge to advise on potential data manipulation tools
5	Knowledge to advise on data mining
6	Knowledge to advocate, and advise on, the use of metadata
7	Ability to advise on the preservation of project records
8	Knowledge of sources of research funding to assist researchers to identify potential funders
9	Skills to develop metadata schema and advise on standards

Fig 3: Nine areas of high skills-gap, relatively high importance

To overcome this, training and development will be essential. The report's analysis of training being provided gives a reasonably reassuring picture of the skills being developed by new entrants to the profession (see report, section 5.3), but established professionals similarly require support with up-skilling and developing new roles.

EXTENDING GOOD PRACTICE

Here the report provides further assistance. The questionnaires in the survey can be used for internal training audits, to inform staff development programmes. Appendix D of the report includes sample elements to help managers with role development and to help colleagues assemble job descriptions and person specifications for new specialist research support posts.

Possibly most useful of all is the review of what the RLUK strategy refers to as 'new ways of working and emerging roles'. [7] Examples of good practice from across the globe are illustrated in the text and referenced in an extensive bibliography. By providing details of developments in Sydney and Purdue, and closer to home from universities such as LSE, [8] Leeds, [9] Cardiff, [10] Liverpool[11] and my own team at Warwick, [12] we hope these will provide inspiration and practical pointers for service development.

Many of the colleagues across the sector to whom I have spoken about the project are both excited by the opportunities for developing support for researchers and daunted by some of the operational issues. We hope this report will highlight potential areas of service development but also offer some practical solutions to help the profession to take this forward.

Re-skilling for research: an investigation into the role and skills of subject and liaison librarians required to effectively support the evolving information needs of researchers, conducted for RLUK by Mary Auckland, is available from http://www.rluk.ac.uk/

NOTES

1 See http://www.rluk.ac.uk/node/657
2 For a fuller review, see Antony Brewerton. '"... and any other duties deemed necessary" – an analysis of subject librarian job descriptions', SCONUL *Focus* 51, (2011), pp. 60–67 (available at http://www.sconul.ac.uk/publications/newsletter/51/18.pdf)
3 See http://www.libereurope.eu/committee/organisation/wg-organisation-skills
4 See http://www.oclc.org/research/activities/rim.htm
5 See http://www.arl.org/rtl/plan/nrnt/index.shtml
6 For example, *The six million dollar subject librarian*: we have the technology – let's build the ideal research support librarian at RLUK Conference 2010, Edinburgh, 11 November 2010; '*Would you please tell me when my light turns green?*' – giving the green light to new areas of library support for researchers at Research Support (CPD25 event), SOAS, London, 18 January 2011; *Supporting research: new opportunities for 'subject librarians'* at University Health and Medical Librarians Group Summer Conference, Southampton, 22 June 2011

7   *The power of knowledge - Phase 2: RLUK strategic plan 2011-2014*, p.8; http://www.rluk.ac.uk/content/rluk-strategic-plan-power-knowledge-phase-two-2011-2014

8   See also Michelle Blake and Nicola Wright, 'Postcards from the (research) edge: staying in touch with students throughout their PhD travels', SCONUL *Focus*, 49 (2010), pp. 33-35; http://www.sconul.ac.uk/publications/newsletter/49/13.pdf

9   See also http://library.leeds.ac.uk/researcher

10 See also Kate Bradbury and Alison Weightman. 'Research support at Cardiff University Library', SCONUL *Focus*, 50 (2010), pp. 65-70; http://www.sconul.ac.uk/publications/newsletter/50/19.pdf

11 See also Emma Thompson, 'Reaching out to researchers – from subject librarian to sales rep', SCONUL *Focus*, 48 (2009), pp. 4-6 http://www.sconul.ac.uk/publications/newsletter/48/2.pdf

12 See also go.warwick.ac.uk/library/researchexchange

All web sites accessed November 2011