

Library Readiness for Research Data Management

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Introduction : the Jisc MRD projects

The University of the West of England's Jisc funded project in Research Data Management (UWE 2013), is one of a group of projects developing research data management infrastructure and is part of Jisc's Managing Research Data Programme (Jisc 2013). The project was initiated by us as the Research and Knowledge Exchange Librarians, with support from the university's Research and Business Innovation Service. Drawing on the outputs and expertise developed in earlier Jisc funded projects, the UWE team has developed accessible and appropriate models for managing research data in a modern university. Working with researchers, research administrators, and IT specialists, the work has focused on selected projects in Health and Life Sciences, and has the potential to be rolled out to other areas within the university.

The objectives of the project

As well as confirming the research data management (RDM) needs of our group of researchers, we set out to clarify and develop processes that fitted with existing university administrative structures. Gaining agreement in the institution for a draft data management policy was an extension of this. In addition we aimed to produce online guidance and information for researchers to support them in making decisions in managing their data; and finally we set out to establish a data repository to sit alongside UWE's Research Repository, and to provide clear and obvious links between research outputs and their underlying data.

So what has this got to do with librarians?

Although not a formal aspect of our project, we have during its life had more than one reason to consider the role of librarians in managing research data. The reasons behind a preponderance of library led initiatives in RDM formed the basis of a presentation given at the UC&R SW conference (now Academic and Research Libraries group) DARTS3 in Dartington in June 2012. More significantly, funded by a training strand of the Jisc MRD2 Programme, there are several exciting projects producing guidance and training materials for academic librarians in supporting and contributing to RDM (for example University of Sheffield 2013, University of East London 2013).

In addition to this work, the report *Reskilling for research*, commissioned by RLUK and written by Mary Auckland (RLUK 2012), identified areas where academic librarians need to develop their knowledge and skills in order to support researchers. Auckland's research found nine areas with significant skills gaps - that is where 50% or more of respondents indicated that they have limited or no skills or knowledge. More telling however, was that all areas were identified as being of increasing significance over the next two to five years. (RLUK 2012, p43)

Of these, and based on the experience of our project, we have identified the following areas as pertinent specifically to Librarians working with and supporting RDM.

- Ability to advise on **preserving research outputs**

This is undertaken by many institutions through their institutional repositories, usually managed through the Library service however it is named, or through disciplinary databases. The interrelationship between published output and underlying data is becoming ever closer, with links to data accompanying published papers, and on occasion even that data itself rather than published papers is becoming the most significant output of research. (Pryor, 2012)

- Knowledge to advise on **data management and curation**, including ingest, discovery, access, dissemination, preservation, and portability

Librarians can act as a point of advice, and need *knowledge about* data curation rather than *experience of* data curation. This is where the Jisc training projects mentioned previously, and the accessible materials from the Digital Curation Centre provide valuable resources.

- Knowledge to support researchers in **complying with the various funders' mandates** including open access requirements.

- Knowledge of **sources of research funding** to assist researchers to identify potential funders

These points can be seen to be closely related. Researchers need to be aware of the requirements funders set in relation to Open Access publishing of outputs and data, and of how these might or might not relate to deals the institution has with particular publishers and content providers. Monitoring and interpreting these perspectives, and identifying what is important to know is a key task for librarians, and an integral part of the RDM landscape.

- Knowledge to advocate, and advise on, the use of **metadata**

- Skills to develop **metadata schema, and advise on discipline/subject standards and practices**, for individual research projects

In the RLUK report there is a great emphasis on the role of the 'subject librarian' and the importance of liaison with the researcher. However, metadata is a field where librarians with very different knowledge and skills can make a significant

contribution. For the 'cataloguers' metadata is what they do, and this knowledge needs to be harnessed in the cause of RDM.

- Ability to advise on the **preservation of project records**

These might include the administrative or process records of a research project which have value as part of the underlying infrastructure, and depending on the type of project may be valuable in sharing and repurposing of data. Issues related to IP, copyright, and data protection are also significant here.

(emphasis added)

The areas of skill and knowledge identified here will need to be both developed by individual librarians, and become embedded as part of the body of professional knowledge. However, an institutional and departmental 'readiness' to engage with RDM is also required. If we consider that the data on skills gaps identified by the RLUK report were drawn from libraries supporting research intensive universities, we might predict that the skills gaps among librarians in modern and business focused universities is likely, though not necessarily, to be as great.

Assessing your library's RDM maturity

Drawing on experience from the Jisc project, and based on the Digital Curation Centre's (DCC) Mini-Cardio quiz (JISC 2011), the project team at UWE has developed a maturity model that can inform the process of assessing an institution's readiness for RDM. It also allows stakeholders to set an aspirational vision of where the institution should/could be in a given time frame. Repeating the exercise after a given time enables and indicates a measure of progress.

Using the areas identified in the RLUK report as a basis, the model has been adapted to be library specific. Members of library teams or management can plot their assessment of their readiness for RDM by identifying with one of a range of statements relating to (as it stands) six different outcomes or aspects of RDM:

- Libraries and the institutional approach to RDM
- Knowledge about research funder data policies
- Knowledge relating to data management and curation
- Training support and guidance for researchers
- Advocating and advising on the use of metadata
- Institutional repositories for data.

To illustrate this further, here are the statements, expressing increasing maturity or readiness in relation to the outcome 'Training support and guidance for researchers'.

1	The Library/Information Service doesn't include RDM issues in training support or guidance for researchers.
2	The library/Information Service offers some training, support and guidance on issues loosely related to data management (for example Copyright, IP, FoI requests), but doesn't offer anything specifically focussed on RDM.
3	Librarians are developing their own knowledge and skills in order to offer RDM training for researchers in the future.
4	We are actively involved in devising the right training strategy for RDM for all relevant staff in our institution.
5	Librarians are working with colleagues in other parts of the university to apply expertise and toolkits from information, research and learning skills perspectives to support researchers with RDM.

Participants can place a mark or sticky dot on the section that most closely reflects their view of where their service is, and another dot to indicate where they think the institution can progress to in, say, three years time, or where they aim to be after a training and development programme.

The complete maturity model can be found on the UWE project web site.

Pryor (2012) has argued that librarians

have unrivalled occupation of the high ground when it comes to owning a long list of fundamentally appropriate skills in classifying, organising, appraising, selecting, annotating, preserving, storing, retrieving, distributing, sharing and managing access to information – some list indeed, , and one that closely reflects the activities implicit in the DCC data curation lifecycle model!

(Pryor 2012, p15)

There is much to be done in many, if not most, university libraries to ensure that existing staff skills and knowledge are built upon to meet the needs of the RDM agenda. This is one tool that can help in getting that process started.

References

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