Let It Go: The risks and rewards of researcher-led Research Data Management services

Rosie Higman

Research Data Services, University of Manchester, Manchester, United Kingdom.
Previously: Office of Scholarly Communication, University of Cambridge, Cambridge, United Kingdom.
E-mail address: rosie.higman@manchester.ac.uk

Abstract:

The Research Data team at the University of Cambridge sits within a wider Office of Scholarly Communication and provides services including advice, a repository and regular training in Research Data Management (RDM). The team initially focused on complying with funder policies in training and information sessions for researchers. This method had limited success and failed to engage researchers, so RDM services are now provided through a more democratic approach which focuses on researchers' needs (Teperek, Higman and Kingsley, 2017). This means that services are constantly evolving in response to feedback from researchers, and a community of interested researchers and support staff have been formed to help deliver services.

There have been clear rewards from adopting this approach including improved researcher engagement, increased awareness of RDM across the University and ultimately more relevant RDM provision for our service users. However, these rewards need to be contrasted with the risks of this approach, in particular researchers going 'off-message' when delivering training and managing the different needs of the disciplines we serve with limited resources. Attempting to balance these needs also raises a broader tension with institutional priorities, which are focused on compliance with funder policies, and produces questions about whose needs should take precedence. There are inevitable difficulties in 'letting go' of control over RDM services and balancing the conflicting priorities this approach has uncovered, but the researcher engagement it has delivered suggests that this is a worthwhile endeavour. This paper will explore these issues through looking at researcher-led events on issues including software management and electronic lab notebooks.

Keywords: Research Data Management, researcher engagement, research support, Data Champions.

Introduction

Research Data Management (RDM) services at many universities in the United Kingdom developed rapidly in response to a series of funder policies, in particular that of the Engineering and Physical Sciences Research Council (EPSRC). This came into force in 2015 and carries the threat of removing funding from non-compliant researchers (https://www.epsrc.ac.uk/about/standards/researchdata/impact/). This has led to RDM support services frequently being heavily geared towards meeting funder requirements and in this context it is easy to lose sight of the wider reasons for RDM.

The Research Data team at the University of Cambridge provides services including a data repository, training, Data Management Plan reviews and individual advice to researchers. These began with a focus on the policies of key funders, especially the EPSRC, but this gleaned a negative reaction from researchers so there was a shift in emphasis to the benefits of good research data management and listening to the needs of researchers (Teperek, Higman & Kingsley, 2017). This has not only resulted in greater engagement from the researchers at Cambridge but it has also led to a dramatically different model of service delivery, trying to listen to researchers' needs and then developing services in response. Researchers have given feedback in workshops, departmental information sessions and directly to the RDM team, but their opinions have also been more actively solicited at events on topics of interest to researchers. Two of these events, on software and electronic lab notebooks (ELNs), will be used as examples of the benefits of researcher-led RDM services, before considering the difficulties it creates.

Researcher-led workshops

Both events were held in January 2017 and were run as a response to feedback from researchers that these issues, managing research software and a lack of an institutional ELN, were ones which were impeding them from good RDM. The software event was part of a national series of events attempting to tease out the main issues researchers were having with research software management, sharing and sustainability, and most importantly to try to develop solutions. The workshops were both well attended, demonstrating that these issues matter to researchers, and the ELN event attracted delegates from several European countries as well as a range of departments across Cambridge.

When developing the programme for these events there was close discussion with researchers to ensure that the workshops would fulfil their needs. The software event had several researchers who actively code leading breakout groups and helping to ensure that the talks in the rest of the day were going to be useful for the attendees (see materials at Chue-Hong et al., 2017). In addition attendees were asked to vote on what topics they would like to discuss in breakout groups, giving researchers control over the majority of the event. This gave researchers space to talk about the issues that were really bothering them and ensured that the Research Data team understood the problems they face. The ELN workshop was more structured as it was a newer topic for many but the researchers' voice was still present through two talks and breakout groups (see materials at Brown et al., 2017). As well as having breakout groups where researchers were asked to discuss issues they had with implementing ELNs, they were also encouraged to contribute throughout the day using Twitter and Slido (https://www.sli.do/). This created a lively atmosphere and gave those of us organising and providing services rich data to assess what was needed after the event.

Facilitating discussion and providing spaces where researchers felt that they were heard, especially in a large institution such as Cambridge, was a key aspect of both of these events but it was also crucial that researchers saw action afterwards to make it worthwhile. In response to these events several service developments occurred: a small group began working on an ELN trial, using feedback from the event to help select appropriate providers which would meet the majority of the researchers' needs as well as those of the institution. After the event the Cambridge attendees were asked to sign up to a mailing list if they were interested in trialling ELNs, providing an engaged cohort for the trial with minimal extra work. The trial is planned to run for two months from 12th June 2017 and after researchers have provided their feedback the working group will look to provide an institutional ELN solution which would already have the support of the academic community at Cambridge.

As the software event was part of a national effort our response was coordinated through this group as well. There were written reports to further publicise the issues and solutions discussed (Duca, 2017 and Higman, 2017) and an online space was also created where beginner researcher-coders can ask questions of those who are more experienced. Additionally this increased the knowledge in the RDM team of these issues which fed into training, Data Management Plan reviews and ensuring that the institutional repository was set up appropriately for research software. Both events had researcher involvement from planning through to service development.

Letting it go wrong?
This approach is not without risks: by prioritising the needs of researchers, in particular the early career researchers who tend to engage, it can be harder to get engagement from senior managers who may not see the importance of these activities. Without engagement from senior management it is difficult to maintain the levels of funding required to run these services. This is particularly important as the more flexible approach to service development implied by researcher-led services (providing services in response to researchers' suggestions and sometimes jointly with them) can be quite resource intensive and makes it harder to plan workloads. Thus, linking these activities back to university strategies, funder policies and how they mitigate the risks associated with RDM is critical (Bellanger et al., 2017).

Furthermore there is also a danger that services will be skewed towards those researchers who speak the loudest. Those researchers need to be heard and have services provided for them but it is also important to consider whose voices are not being heard and what can be done to ensure that a broad range of researchers' needs are being considered in service development.

Conclusion
The workshops described demonstrate some of the ways it is possible to involve researchers in the direction of an RDM service. In the Office of Scholarly Communication at Cambridge this was part of a broader effort to engage researchers sufficiently to allow them to influence the RDM service which included the Data Champions programme where researchers act as local advocates for RDM in their departments (Higman, Teperek & Kingsley, 2017). Whatever the activity used to engage researchers a researcher-led approach to RDM implies actively listening to service users and being flexible about how events and services develop as a result.

'Letting go' of some control of RDM services is worthwhile. Beyond any particular funders' requirements or institutional initiatives the need to look after and share data to facilitate research persists. RDM support services are there to improve research and help researchers, so it is necessary to listen to what difficulties researchers face and work with them to resolve these issues. Taking a researcher-led approach also positions RDM teams as partners with researchers rather than just service providers, providing stronger engagement and greater credibility. However the approach does create certain risks and needs to be coupled with senior management engagement and advocating for funder compliance if the service is to be sustainable. Balancing a researcher-led approach with keeping wider institutional stakeholders onboard complicates the requirements for an RDM service but it is worthwhile to ensure that RDM services remain relevant and useful for researchers.

Acknowledgments
My thanks go to Marta Teperek for her encouragement, guidance and all of the work she put into making the workshops described here successful.

References

Bellanger, S., Higman, R., Imker, H., Jones, B., Lyon, L., Stokes, P., Teperek, M., Verdicchio, D. (2017). *Strategies for engaging senior leadership with RDM – IDCC discussion.* https://unlockingresearch.blog.lib.cam.ac.uk/?p=1435 (accessed 26th May 2017).

Brown, C., Bruno, I., Downie, A., Frey, J. G., Haines, H., Higman, R., Hyvonen, M., et al. (2017). *Presentations and notes from the Electronic Lab Notebooks event on 13 January 2017*. https://doi.org/10.17863/CAM.7217

Chue-Hong, N., Eglen, S., Whitaker, K., Gatto, L., Teperek, M., Higman, R., Haines, H., & et al. (2017). *Research software management, sharing and sustainability workshop materials.* https://doi.org/10.17863/CAM.7178

Duca, D. (2017). *What is everyone saying about research software?*. https://researchdata.jiscinvolve.org/wp/2017/03/02/everyone-saying-research-software/ (accessed 26th May 2017)

Higman, R. (2017). *The art of software maintenance*. https://unlockingresearch.blog.lib.cam.ac.uk/?p=1286 (accessed 26th May 2017)

Higman, R., Teperek, M., and Kingsley, D. (2017). *Creating a community of data champions* [pre-print]. https://doi.org/10.1101/104661

Teperek, M., Higman, R., and Kingsley, D. (2017). *Is Democracy the Right System? Collaborative Approaches to Building an Engaged RDM Community* [pre-print]. https://doi.org/10.1101/103895