

SES consortium, RDM workshop, Imperial College, May 9<sup>th</sup> 2013

# Training and education of library staff for Research Data Services

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# The questions this talk addresses

- Q1 Will RDM staff in libraries be existing staff or new recruits?
- Q2 Who should training be delivered to?
- Q3 How should training to existing staff be delivered?
- Q4 What should be the content in terms of knowledge and skills be?
- Q4b What level should it be?
- Q5 What attitudinal changes might be needed?
  
- Q6 What resources exist that I can use for training others or self study?
- *What is the best methodology to find out the answers for my library?*
  
- Q7 What are “library schools” doing for new entrants to the profession?

# Q1 New recruitment or on the job training of existing staff?

- Evidence (Bresnahan and Johnson, 2013; Corral et al. 2012) and logic points to retraining as the main approach to workforce issues created by RDM
  - Limited budgets
  - RDM is relevant to staff in many library teams
  - *But may be some recruitment in technical areas and coordination*
- Corral et al (2013) survey suggests this might be by self-training / learning on the job as much as institutionally supported learning

# Q2 For whom should the training be?

- Research support teams
- Liaison librarians
- Metadata specialists
- Library IT specialists
- ... All staff
- *Library staff with Research admin, Archives/Records management and IT staff*
- *Including direct engagement with researchers*

# Q3 How should training be delivered?

- One-day workshops (74%)
- Panels and presentations (68%)
- Print hand-outs/guides (63%)
- Informal discussions (63%)
- Online tutorials (47%)
- One-to-one consultations (42%)
- Webinars (32%)
- Multi-day workshops (26%)
- From a US study, in one institution (Bresnahan and Johnson, 2013)
- Likely to vary by RDM preparedness, research intensiveness, size of institution

**Q4 WHAT SKILLS NEED TO BE TAUGHT?  
REFLECTIONS FROM THE RDMROSE  
EXPERIENCE**

# The URL...

<http://www.sheffield.ac.uk/is/research/projects/rdmrose>



# RDMRose

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## RDMRose Learning Materials

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### ABOUT RDMROSE

RDMRose is a JISC funded project to produce taught and continuing professional development (CPD) learning materials in Research Data Management (RDM) tailored for

An Open Educational Resource on RDM tailored for information professionals

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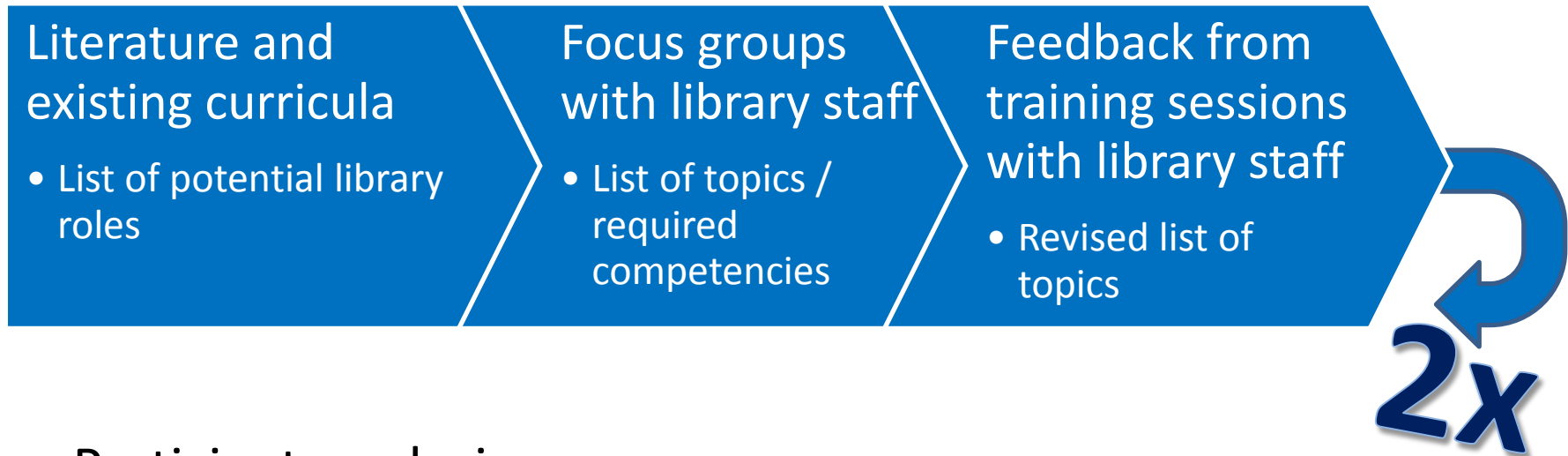
self-supported CPD or as an educator, we would greatly welcome your feedback. Please fill out this [evaluation form](#). It will help us further enhance the learning materials!

# How can you use the learning materials?

- Gain a systematic grounding in RDM, through self-directed CPD
- Undertake targeted learning about an RDM topic that is key for your role
- Reuse material or ideas for teaching your library colleagues and others
- Come to Sheffield to take RDM as a module on one of our Masters courses



# Design approach to learning materials



- Participatory design process
- Learning needs assessment (published on RDMRose web site)
- Process based or emergent curriculum
- Trialled with 40+ library staff at Leeds, Sheffield and York

# Learning approach

- Open ended context demands exploration of issues, with individual professional reflecting on how issues relate to their own role and how the library organisation might change
- More than about lists of competencies/knowledge, also about identity – so strong element of reflection
- Need to understand perspective of researchers
- Need to understand perspective of other professional services: especially research office, computing service, archives and records managers
- *Not for specialist digital curators or data analysts*

# Module overview

1. Introductions, RDM, and the role of LIS
  2. The nature of research and the need for RDM
  3. The DCC curation lifecycle model
  4. Key institutions and projects in RDM
  5. What is data?
  6. Managing data
  7. Case studies: research projects
  8. Case study: Institutional context, and conclusions
- Eight sessions
  - Each equivalent to about half a day of study
  - Consist of introduction, slides, activity sheets, resources

# The learning materials

- Desire for practical hands on experience needs to be balanced by a grasp of strategic issues
- Problem Based Learning (PBL)
- Inquiry Based Learning (IBL)
- Eight sessions equivalent to about 4 hours of study each
- Slides
- Readings
- Learning activity ideas
- Audio files of interviews with researchers
- A fictional case study

# A sample of the activities

- An introduction to the theory of disciplinarity
- A discussion of DCC curation lifecycle and alternative models
- Interviewing a researcher about their work
- Designing a guidance web site
- Reading Data Management Plans; reading the local RDM policy
- Writing potential collection policies for an institutional repository
- If RDM were a movie – what genre would it be?
- Analysing recordings of interviews with five researchers
- Discussing research and professional staff stakeholders perspectives through a complex fictional case study
- Analysis of job interviews

# Topics and their importance

	Current knowledge session 1	Current knowledge session 8	Change in current knowledge (8-1)	Importance of topic session 1	Importance of topic session 8	Change in importance of topic (8-1)
1) The basics of Research Data Management	1.3	2.9	1.6	3.9	3.9	0.0
2) The potential LIS roles in RDM	1.3	2.7	1.4	3.9	3.7	-0.2
3) Exemplars of LIS roles in RDM from other institutions	0.5	1.9	1.4	3.4	3.3	-0.1
5) DCC curation lifecycle model	0.7	2.2	1.5	3.4	3.0	<b>-0.4</b>
7) DCC web site structure, contents and tools	0.7	2.2	1.5	3.0	3.1	0.1
8) How research is important to HEIs and how it is governed	1.9	2.6	0.7	3.5	3.7	0.2
9) The social organisation of academic research: disciplines, specialities, interdisciplinarity	1.3	2.6	1.3	3.2	3.5	0.3
10) Perspectives of researchers, from the inside	1.0	2.5	1.5	3.8	3.7	-0.1
14) How to check compliance to funders' data policy	0.8	1.9	1.1	3.5	3.6	0.1

Rate your current level of knowledge/experience  
0= none  
4= expert

0=not important  
4= very important

# Topics and their importance

	Current knowledge session 1	Current knowledge session 8	Change in current knowledge (8-1)	Importance of topic session 1	Importance of topic session 8	Change in importance of topic (8-1)
15) Institutional policies on RDM, including the local policy	1.1	2.3	1.2	3.4	3.9	<b>0.5</b>
17) How to persuade a researcher that data management is important	0.9	2.5	1.6	3.2	3.4	0.2
20) Understanding of the perspective of the Research office on RDM	0.9	1.5	0.6	3.1	3.4	<b>0.3</b>
22) Knowledge of who is who in library/research office/computing service	1.1	2.0	0.9	3.2	3.6	<b>0.4</b>
23) Key messages about data management best practice for researchers	0.6	2.2	1.7	3.6	3.8	0.2
26) Sources for reusable data you might want to promote to researchers	0.6	1.6	1.0	3.2	3.3	0.0
28) Understanding of data analysis and ability to advise on this	0.5	0.8	0.3	2.5	2.5	0.0
29) Understanding of how data might be cited in publications	1.0	2.2	1.2	3.3	3.4	0.1

	Rank by current activity	Rank by top future priority
Open access and policy	1	1
Copyright	2	8
Data citation	3	7
Awareness of reusable sources	4	5
External data sources	5	11
Early career awareness	6	3
PGR training	7	3
Advisory service	8	2
Licensing	9	14
RDM plan advice	10	11
Web portal	11	9
Data repository	12	5
Metadata	13	10
Audit RDM	14	13
Data analysis	15	17
PGT training	16	15
Data impact	17	15
UG training	18	18

83 (c 50%) UK HEIs responded to our survey conducted in November 2012 [paper available from JOLIS OnlineFirst doi:10.1177/0961000613492542 or from WRRO <http://eprints.whiterose.ac.uk/76107/> ]



# Enhancements of RDMRose

## Suggestion

1. Discussion of local team objectives within sessions
2. More about local implementation, eg local processes;
3. More directly relevant to their role
4. Less time- consuming
5. More on what people are already doing
6. Input from other professional services/ researchers

## What we did

1. Added
2. A problem... they did not exist at the time!
3. Hard to achieve
4. Workshops with online material
5. Added – material needs to be constantly updated
6. Added – but probably needs more

*Any training programme will need continual updates....*

# Q5 Attitudes and mindsets needed

- Garritano and Carlson (2009) mention:
  - Courage
  - Risk taking
  - Collaborative skills
- DigiCurv digital curation curriculum framework
  - Integrity
  - Communication and advocacy skills
  - Responsiveness to change

# A methodology: Training needs assessment tool

List of possible topics (published in the article) – then

- Is it relevant to my job now ?
- Will it be relevant in 5 years ?
- Am I able to explain the issues surrounding this topic to a researcher ?
- I currently interact with researchers about this topic
- I feel very anxious/ anxious/ comfortable/very comfortable about discussing this topic with researchers ?
- Staff needs are unclear
- Participatory approach to learning needs assessment is recommended by literature
- *Strategic priorities could override staff preference – indeed likely to do so in unfamiliar territory*

(Bresnahan and Johnson, 2013)

# Q6 What resources exist I can reuse in training?

- Online resources
  - RDMRose
  - DCC's *RDM for librarians*, <http://www.dcc.ac.uk/training/rdm-librarians>
  - Edinburgh's *DIY kit* and *Mantra*, <http://datalib.edina.ac.uk/mantra/>
  - Open Exeter's *23 Things (+1)* for Research Data Management, [http://blogs.exeter.ac.uk/openexeter\\_rdm/blog/tag/holistic-librarian/](http://blogs.exeter.ac.uk/openexeter_rdm/blog/tag/holistic-librarian/)
- UKDA training
- Sheffield iSchool working with a London university on a bespoke set of workshops and also UKeIG short course in September

# Self-study sources

- Corti et al. (2014) *Managing and sharing research data: A guide to good practice*. London: SAGE.
- Pryor, G. (2012). *Managing Research Data*. London: Facet.
- Pryor, G., Jones, S. and Whyte, A. (2014). *Delivering research data management services*. London: Facet.
- DCC web site
  - Jones, Pryor and White (2013) explains the issues in setting up RDM service, <http://www.dcc.ac.uk/resources/how-guides/>
- JISC Managing Research Data programme of research, <http://www.jisc.ac.uk/whatwedo/programmes/mrd.aspx>
- International Journal of Digital Curation, <http://www.ijdc.net/index.php/ijdc/index>

# Q7 Role of “library schools” and new entrants to the profession

- Sheffield has dedicated module on RDM as an option
  - Workshops in tandem with RDMRose online materials
  - Focus on researcher and relations with other professional services
  - Transferable skills: strategic thinking and dealing with complex, wicked problems
- Sheffield’s MSc Digital Library Management; Also a new MSc Data science (FT)
- Aberystwyth’s online Masters

# Signs of the times for “library schools” (now information schools)

- Intensive demand for CPD while (home) PGT demand more static
  - More on-site training and flexible learning
  - More knowledgeable learners: know about subject and about teaching process itself
  - Practical training or reflexive, inquiry based learning?
- Pressure on academic departments to have real world “impact”, engage with professional communities
- Openness eg OERs
- Nature of professional challenges more wicked and complex – require partnership – also in teaching

# Future development: Wicked ways project

- Funded by *Leadership Foundation for HE*
- Looking at RDM as a “wicked problem”
- Building a multi-professional community of practice in White Rose group + others from Yorkshire and the Northern collaboration
- What we can learn from approaches like *Mess mapping* and *Design thinking* for coming to terms with complex problems like RDM



# References

- Bresnahan and Johnson (2013) Assessing scholarly communication and research data training needs, *Reference Services Review*, 41 (3) 413-433
- Corral S, Kennan MA and Afzal W (2013) Bibliometrics and research data management: Emerging trends in library research support services, *Library Trends*, 61 (3) 636-674.
- Cox AM, Verbaan E and Sen B (2012) Upskilling liaison librarians for research data management. *Ariadne* 70. Available at: <http://www.ariadne.ac.uk/issue70/cox-et-al> (accessed 30 April 2014).
- Cox AM and Pinfield S (forthcoming) Research data management and libraries: Current activities and future priorities, *Journal of Library and Information Science*, doi: 10.1177/0961000613492542.

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