



... because good research needs good data

Data management training: making the most of limited resources

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The challenge

- Well managed, high quality research data is valuable and your institution's research credibility and reputation depend on it (e.g., climate data crisis).
- Evidence of sound data management planning is increasingly becoming a requirement by Research Councils and funding bodies
- Responsibility for data management and longer-term curation now shifting more to HEIs and less to places of deposit (e.g., AHDS)



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How to meet the challenge with limited resources

- Make a **solid case** for dedicating shrinking institutional funds and resources towards data management training activities and support
- Target the **right audience** for participation at the **right time**
- Make use of what training channels and courses your institution has **already** invested in developing
- Make use of **external training materials** that other initiatives have been funded to create



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Making the Case

- Familiarise yourself with what research councils and funding bodies require in terms of data management (DCC policy table offers an at-a-glance reference)
- Make sure that researchers and senior managers in your institution are made aware of these requirements and the fact that grant income may be lost or withheld if data management requirements are not met
- Work with your Research and Enterprise department (or equivalent) to make sure that they are aware of these requirements and can provide initial advice during the grant application stage (or simply point to the DCC table)



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Funders' data policies

Research Funders	Policy Coverage		Policy Stipulations					Support Provided		
	Published outputs	Data	Time limits	Data plan	Access/sharing	Long-term curation	Monitoring	Guidance	Repository	Data centre
AHRC (Arts and Humanities Research Council)	●	●	●	●	●	◐	○	●	○	◐
BBSRC (Biotechnology & Biological Sciences Research Council)	●	●	●	●	●	●	●	◐	●	○
EPSRC (Engineering and Physical Sciences Research Council)	●	○	●	○	●	○	○	○	○	○
ESRC (Economic and Social Research Council)	●	●	●	●	●	●	●	●	●	●
MRC (Medical Research Council)	●	●	●	●	●	●	○	●	●	◐
NERC (Natural Environment Research Council)	●	●	●	●	●	●	●	●	●	●
STFC (Science and Technology Facilities Council)	●	○	●	○	●	○	○	○	●	◐
Wellcome Trust	●	●	●	●	●	●	●	○	●	○

<http://www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies>

Making the Case

- Review existing **institutional aims and policies** for hooks into data management (e.g., research aims, code of good research practice)
- In many cases, such policies make statements that implicitly depend upon good data management; use these to argue that your institution has already **made a commitment** to manage their data that must be backed up (especially useful in making the case to senior managers)
- Make sure that researchers are aware of these policies; do they fully understand what these policies state and what they - through their employment – have **agreed to adhere to**? (useful in making the case to researchers)

Example: GU Code of Good Research Practice

Relevant Excerpts:

... the University expects researchers to observe the standards of practice set out in guidelines published by funding bodies, scientific societies and other relevant professional bodies. **The receipt of funding from these agencies requires the University to confirm compliance with their terms and conditions; *it is therefore essential that all researchers are aware of their responsibility to observe these standards during their work.***

This code of good practice in research is intended for **all staff**, including persons with honorary positions, and **students** carrying out research at, or on behalf of, the University.

Example: GU Code of Good Research Practice

Relevant Excerpts:

Throughout their work, researchers are required to keep clear and accurate records of the procedures followed and of the results obtained, including interim results. This is necessary not only as a means of demonstrating proper research practice, but also in case **questions are subsequently asked about either the conduct of the research or the results obtained.** For similar reasons, data generated in the course of research must be kept securely in paper **and/or an appropriate electronic format.** The University expects such data to be securely held for a period of **ten years after the completion of a research project,** unless otherwise specified by the research funder or sponsor.

Example: GU Code of Good Research Practice

Relevant Excerpts:

It is the responsibility of the University to ensure that there are **adequate provisions for training** and development to enable research staff to attain **necessary skills** for their current role, and to support their future career development.

Example: GU Code of Good Research Practice

Relevant Excerpts:

Researchers are advised to ensure they are **familiar with any specific terms and condition attached to their funding.**

Example: GU Research Aims statement

We aim to be:

A successful research institution, across a range of measures including **quality of research outputs**, research income, international recognition and collaborations and performance relative to peer institutions both nationally (eg Russell Group) and internationally (eg Times Higher international league table)

To achieve these aims, our research strategy for the period 2006 -2010 is built around four strategic themes:

- International Excellence
- Inter-disciplinary research
- Knowledge transfer
- Research environment

<http://www.gla.ac.uk/research/aimsassessmentandpolicies/ouraims/>

Making the case: key points

- When making the case for investment, spend time on getting the terminology right; make sure that the language you use is relevant to your audience (senior managers, researchers, students)
- Relate management and curation to activities to existing aims and policies wherever possible – show how data management support these aims and policies
- Aim to embed data management support and guidance within workflows that are already familiar to researchers and supported within the institution (e.g., raising a Project Approval Form with R&E)

Target the right audience at the right time

- Identify what researchers are currently doing and what their training needs are (DAF approach can be helpful here)
- Assess where your investment of time and money in developing training courses will be best placed (postgraduate students? early researchers? research support staff?)
- Refine your messages to each target audience to ensure that it has relevance for that group (e.g., a researcher about to retire will be less driven by funding body requirements but may be more interested in ensuring the longevity of their body of research)
- Avoid using curation-related terminology. Terms that are used frequently with regards to data management and curation are usually meaningless to researchers. Instead, use terms that they are familiar with (data management may not mean much while most researchers are aware of the need to share data)



“JISC should develop a Data Audit Framework to enable all universities and colleges to carry out an audit of departmental data collections, awareness, policies and practice for data curation and preservation”

Liz Lyon, *Dealing with Data: Roles, Rights, Responsibilities and Relationships*, (2007)

- provides users with an asset register (a snapshot at a point in time)
- enables institutions to get a better idea of the scale and scope of their data collections and current data management activity
- highlights areas where central services, training, and high-level policies can be of most value

Use what you've already got

- For researchers involved in the social sciences or medical research, ethics and data protection are familiar issues that must be addressed for each new project
- Most universities run data protection and/or freedom of information training courses specifically for researchers
- Make sure that your DP office and researchers understand that adherence to data protection and FoI legislation depends upon sound data management practice
- Investigate the possibility of running joint courses and/or embedding a few slides in their courses on how DP can be safeguarded by data management activity

GU DP and FoI Office mandate

The Data Protection and Freedom of Information Office is **responsible for providing advice, expertise, and training about Records and Information Management** within the University, plus the operation and implications of the Data Protection Act, the Freedom of Information [Scotland] Act, the Environmental Information [Scotland] Regulations, and related legislation.

<http://www.gla.ac.uk/services/dpfoioffice/>

Information Management Courses

The DP Office runs courses that cover:

- the creation, keeping, **management**, and destruction of information and records
- the entire life cycle of a record, **in whatever format**, from creation through to destruction or transfer
- allowing an organisation to know what information it has, where it is kept and **how long it is kept**
- setting of **retention schedules** for different types and categories of records and information
- advising on **cost effective systems and procedures** to meet security requirements

Remember – the DP Office will likely also be facing tough economic times and may be more than happy to cooperate in the running of data management courses to achieve their mandate!

<http://www.gla.ac.uk/services/dpfoioffice/>

No relevant courses? Request one

- Indirects and estates costs that are applied to research grants go towards funding central services so make use of them!
- Make sure your institution knows what training you and your colleagues need (identifying and communicating researchers training requirements is key here)
- Most universities will develop and deliver bespoke training if there is sufficient demand
- If you think you are too small a small group, partner with similar research groups to obtain critical mass and make a request
- Suggest that your SDS work with external initiatives if expertise doesn't exist in-house (DCC, UKDA, DPTP)
- Your SDS will need to demonstrate that it is responding to user needs, so a specific request may be very welcome.

Use what others have created

- DC 101 by the Digital Curation Centre
- Data management and sharing guidance from the UKDA
- Several of the JISC 07/09 and 04/10 projects aim to develop training components
- **All** are or will be available for reuse and repurposing



- uses the lifecycle model as a basis
- provides an introduction to key curation activities and issues
- gets participants to think about their specific curation requirements
- focuses on developing critical thinking amongst researchers and research support staff
- brings together researchers and support staff to identify intervention points

Key points

- Collaboration in running training courses can be useful as it bridges gaps in expertise covered by each contributor (DCC/UKDA/Sudamih)
- Generic materials are a useful starting point for institutional staff development courses; they can be fleshed out to include local references and contacts (e.g., GU Staff Development Service courses)
- Generic materials could be tailored for postgraduate training courses (DCC/Aberdeen)

Conclusions

- Make a good case for investing in data management training
- Draw upon existing policies and mandates wherever you can
- Spend some time identifying current researcher practice and training needs
- Make sure you are putting your effort where it will count
- Don't reinvent the wheel – if existing training materials can be augmented or adapted then pursue this route
- Make use of training materials that have been developed specifically for reuse



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Thanks
Any questions?

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