Research Data Management Survival Guide

This document is a guide to effective research data management (RDM) for PGR researchers. Although often ignored, the appropriate management, dissemination and archiving of your data is of crucial importance to the success of your research. More information on the benefits of following good practice in RDM can be found here. This guide outlines the main aspects of successful RDM, as well as listing some useful links to wider sources and additional information.

Year 1

Perhaps the greatest RDM priority at the beginning of your research is establishing methods and standards that you can replicate throughout your study. Setting up effective ways of managing, storing and sharing your data from the outset will ensure that you will know where to find your information if it is needed in the future. Some key points to consider are:

- Find appropriate citation manager software (e.g. <u>EndNote</u>, <u>Mendeley</u>, <u>Papers</u>, <u>Zotero</u>). Training is <u>available</u>. Make sure you start compiling your reference database from the start and check your references when you do automatic imports.
- Before you start collecting your research data, consider how it will be managed and maintained. It is important to identify what <u>Hardware</u> your data will be stored on and what <u>Software</u> you will use to create it. This choice will depend on your research methodology. Ensure that you have access to hardware storage for your personal <u>Backup</u> of data.
- Also consider alternative forms of storing data, such as Cloud Storage.
- Many researchers will need to consider <u>Ethical Issues</u> if using personal or confidential data. In this regard, it is especially important to know whether your research is impacted by the <u>Data Protection Act</u>.
- Similarly, it is important to consider whether you have copyright permission for all your data, especially considering the different implications that <u>Copyright</u> now has upon research dissemination.
- Set up a functional and replicable <u>File Directory</u> on all devices on which your research data will be stored. In addition, the appropriate <u>Naming and Versioning</u> of files and folders will ensure that your data can be easily accessed in the future.
- Make sure you document your data accurately and consistently to aid identification, reuse by others and future replication or validation (<u>Metadata</u>).

Year 2

Moving into the second year of research, it is likely that you will increasingly consider the **Sharing** and dissemination of your data. Here are some ways of sharing your data:

- When sharing data with other people within Exeter University, you may want to consider the University Drop Box.
- Researchers are increasingly using online sharing formats, such as <u>Google Docs</u>, <u>Dropbox</u> and <u>Skydrive</u>. Be wary of using cloud storage for confidential data.

Year 3

Approaching the end of your research, it is vital that you think about the ways in which your data is going to be shared upon completion of your thesis:

- It is especially important that read the University of Exeter's information on <u>Open</u>
 Access and <u>Online Publication of Your Thesis</u>.
- You are able to place a temporary <u>Embargo</u> on your completed thesis so that you
 are able to publish articles/chapters/books based on your research before it becomes
 publically accessible.

Research Data Management Checklist



- 1. Learn to review literature effectively
 - a. Identify suitable reference manager for literature
 http://as.exeter.ac.uk/it/equipmentandsoftware/software/frequent/endnote/
 http://blogs.exeter.ac.uk/businesslibrary/blog/2012/03/15/mendeley-and-endnote/
 - b. Understand how the library works http://as.exeter.ac.uk/library/using/
 - Understand subject specific resources http://www.exeter.ac.uk/departments/
- 2. Set up a consistent data/file storage and backup system, including:
 - a. Data storage location
 - i. Cloud storage
 http://www.thetop10bestonlinebackup.com/cloud-storage
 https://www.dropbox.com/
 - ii. University Storage http://as.exeter.ac.uk/it/files/udrive/
 - b. Data backup plan

http://as.exeter.ac.uk/it/files/backup/

- c. Folder organisation
 - i. Folder directory
 - ii. File names and Versioninghttp://www.records.ncdcr.gov/erecords/filenaming_20080508_final.pdf
- d. Data security

http://as.exeter.ac.uk/it/regulations/infosec/

- i. Encryptionhttp://blogs.exeter.ac.uk/openexeterrdm/blog/tag/encryption/
- ii. Data protection
- iii. http://www.exeter.ac.uk/dataprotection/
- e. Sharing Data
 - http://www.gla.ac.uk/services/datamanagement/lookingafteryourdata/data sharing/
- 3. Investigate the importance of open access and keeping records
 - a. Data archiving and open access
 http://as.exeter.ac.uk/library/resources/openaccess/
 - b. Metadata

http://blogs.exeter.ac.uk/openexeterrdm/blog/tag/metadata/