



University of
Lancashire

Research Data Management: Survival Guide for Postgraduate Students



Research & Knowledge Exchange Service

Lancashire.ac.uk

What Is Research Data Management?

Research Data Management (RDM) is a general term covering how you organise, structure, store, care for and share the data collected or created during a research project. RDM includes:

- Planning how your data will be managed before the start of a research project. Many major funders require data management plans to be included in a grant application.
- Good RDM practice on a day-to-day basis throughout a research project to prevent data loss and increase efficient working.
- How will data be preserved in the long term? How will it be shared if this is a funder requirement?

What Is Open Data?

Open data is data that can be freely used, re-used and redistributed by anyone subject only, at most, to the requirement to attribute and share alike. Data becomes 'open' by depositing it in a repository or data centre - national, subject or institutional. Most major research funders mandate the open sharing of data.

The University of Central Lancashire has adopted a Research Data Management Policy requiring that data is managed to the

highest standards as part of the University's commitment to research excellence:

<http://www.uclan.ac.uk/research/environment/strategy.php>

Where to Start

Planning before starting your research, write a data management plan (DMP) outlining the sort of data you will be collecting or creating and how you will manage it. Find out more on page 4.

Reference management the University provides RefWorks: <https://refworks.proquest.com/>. The Library Research Support Team provides training and guidance in reference management resources: LISResearchSupport@lancashire.ac.uk

Training a range of training and awareness-raising sessions are available through The Open Research Team: rdmsupport@lancashire.ac.uk

Ethical issues all doctoral research requires ethical approval. Find out more from the Ethics web site: <https://www.lancashire.ac.uk/research/ethics>

Data Protection Act and GDPR If you are working with personal data, you should be aware of the University's current Data Protection Policy and GDPR obligations.

latest Data Protection information is available on the University's official Data Protection pages:

<https://www.lancashire.ac.uk/legal/data-protection>

This page includes:

- The University's **Data Protection Policy**
- Guidance on **UK GDPR** and the **Data Protection Act 2018**
- Details about **individual rights, subject access requests, and privacy notices**

Contact for Data Protection Advice

For advice or queries relating to Data Protection or GDPR, contact the Legal and Governance team:

dpfoia@uclan.ac.uk

Copyright make sure you have copyright permission for all the data you intend to include in your thesis. Images can be a problem. Look for images that state they are copyright free, in the public domain or have a CC-0 licence attached.

On-site storage all postgraduates can ask for a locker in which to store equipment and data securely:

help4researchstudent@uclan.ac.uk

Writing a Data Management Plan

Writing a DMP will help you to manage your data effectively throughout your research, prevent data loss and enable you to find data files quickly. It is a good idea to get used to writing DMPs as an increasing number of research funders expect a DMP (sometimes known as a data sharing plan) to be included in grant applications.

In general, a DMP covers the following areas:

- Description of the data to be collected or created
- Standards and methodologies to be used for data collection and management
- Documentation and metadata (descriptive information)
- Ethics, legal (e.g., Data Protection) and IPR issues
- Storage, back up and security
- Plans for data sharing and open access
- Strategy for long-term preservation

Use the Digital Curation Centre's [DMPonline](#) tool to help you to create a DMP. The tool is available from [DMPonline](#). Once you have registered using your UCLan credentials, you are able to choose from a generic or funder template, save and return to your plan, and share your plan with collaborators or supervisors.

Checklist for a data management plan:

http://www.dcc.ac.uk/sites/default/files/documents/resource/DMP/DMP_Checklist_2013.pdf

Data Storage, Back Up and Security

Data must be securely stored and backed up throughout the project to prevent data loss and unauthorised access. There are a number of options available to you:

Personal drive (N:) 50GBs of secure, backed-up storage, accessible remotely but not shareable.

Shared drive (S:) shared storage provided by LIS on request by a member of staff; backed-up, password-protected, accessible remotely. If you are part of a research group the PI may ask you to save data here. Capacity is limited so you **MUST** manage data held here efficiently.

OneDrive cloud storage provided by Microsoft, up to 1TB storage per user, can be private or shared with anyone, backed-up and retrievable in case of accidental loss, data is automatically encrypted.

This is the only cloud service endorsed by the University.

Email encrypt attachments sent externally; do not use email as a back-up for data.

External storage devices use only encrypted devices to store data. Store more than one copy in separate locations.

Encrypt external/mobile devices, especially if taken away from the University.

Data collected in the field must be uploaded to the UCLan network as soon as possible and deleted from your device.

Do not store University data at home.

If you are keeping data in more than one place or collaborating with a group of people make sure you have a **method of controlling versions**, avoiding replication and multiple copies. Read guidance from the UK Data Archive: <http://www.data-archive.ac.uk/create-manage/format/versions>

Organising Your Data

Use folders group files within folders so information on a particular topic is located in one place.

Structure folders hierarchically start with a limited number of folders for the broader topics and then create more specific folders within these.

Separate ongoing and completed work as you start to create lots of folders and files, think about separating your older documents from those you are currently working on.

Name folders appropriately name folders after the areas of work to which they relate and not after individual researchers or students. This avoids confusion in shared workspaces and makes the file system easier to navigate for people joining the workspace.

Be consistent label files consistently and meaningfully so they can easily be found - choose a system and stick to it.

Order confirm which element of a file name should go first, so that files on the same theme are listed together and can therefore be found easily.

Dates make logical use of dates so that files display chronologically, e.g., YYYY-MM-DD.

Avoid punctuation symbols and spaces in file names use alphanumeric characters, plus the hyphen and underscore.

Backup ensure that your files, whether they are on your local drive, external hard drive or a network drive, are backed up.

Review data assess data regularly or at the end of a project to ensure files are not kept needlessly. Put a reminder in your calendar so you do not forget. Storing data on the University network is costly - **delete data that is no longer required.**

Sharing and Preserving Data

Not all data needs to be kept or made open retain data that directly underpins a publication or thesis and deposit this data in UCLanData.

What is Lancashire Online Research Data?

Lancashire Online Research Data is a data repository developed to ensure researchers are able to comply with funder and University policies.

Why should I use Lancashire Online Research Data?

Increase the impact and reach of your research
Research is easily discoverable through search engines such as Google and Google Scholar
Easy to link your datasets with the associated publications in Lancashire Online Knowledge
Easier to discover and cite using the digital object identifier (DOI) that is allocated on deposit
Metadata standards for discoverability and preservation
Data will be preserved for as long as required
Security and integrity of data is guaranteed by our storage partner, Arkivum

How do I find Lancashire Online Research Data?

From <https://data.lancashire.ac.uk/>. Use your University network credentials to login. Before depositing for the first time make sure you read the advice available in the Guidance and Help section.

Make sure you retain data in **open** file formats that will be more accessible over time. Use the UK Data Archives list of preferred formats: <http://www.data-archive.ac.uk/create-manage/format/formats-table>

Help and Support

Awareness Raising

Bespoke Research Data Management (RDM) sessions can be organised and delivered to schools, research groups, student groups, committees, and team meetings on request. Sessions can be tailored to the needs of your audience.

General RDM Queries

General questions about Research Data Management are welcomed, including anything related to good practice, policies, or available support.

Data Management Planning

Support is available for drafting or reviewing Data Management Plans (DMPs) for research projects and funding applications.

Lancashire Online Research Data

Assistance is provided for uploading and managing datasets within the Lancashire Online Research Data repository.

Deskside Service

A member of the team can visit your office to answer RDM questions, troubleshoot issues, or provide hands-on help with data upload and organisation.

Contact

For any of the services listed above, please ask your supervisor or Principal Investigator (PI) to contact the Open Research team:

rdmsupport@lancashire.ac.uk

University Research web site:

<https://www.lancashire.ac.uk/research>