What are research data?

Unlike other types of information, research data are collected, observed, compiled or created, for the purposes of analysis to generate and validate original research results.

Research data can also be regarded as situational in that the same information or materials may be research data for some people but not others. For example: student results data collected by Universities to record the progress of individual students throughout their course are viewed by administration officers as part of a students’ record, but when used by researchers undertaking studies in teaching and learning trends, may provide rich research data for analysis.

Likewise, the same information may be research data for a person at one time point, but not at another time point, depending on whether the data are used for analysis. Data can also be created by researchers for one purpose and used by another set of researchers at a later date for a completely different research agenda.

Types of research data

What researchers call ‘research data’ can depend on their discipline or field of research.

As a humanities scholar you might talk about your primary sources or texts. If your research is in a social science, you may think in terms of survey results, interviews and statistics. You will probably have different terms again for the outputs of your experiments and observations if you are a scientist.

Research data come from many different research methods, techniques and sources. The following identify but a few:

- Statistics and measurements
- Results of experiments or simulations
- Observations e.g. Laboratory notebooks, field notebooks, diaries
- Models, algorithms, scripts
- Interview recordings and transcripts, and coding applied to these
- Images - from cameras and scientific equipment
- Textual source materials and annotations
- Slides, artefacts, specimens, samples
- Database contents (video, audio, text, images)
- Methodologies and workflows
- Contents of an application (input, output, logfiles for analysis software, simulation software, schemas)
Other data associated with your research project
It is also important for you to manage other data/information associated with your research both during and beyond the life of a project:

- Correspondence (electronic mail and paper-based correspondence)
- Project files
- Grant applications
- Ethics applications
- Technical reports
- Technical Appendix
- Research reports
- Research publications
- Master lists
- Signed consent forms
- Social media communications such as blogs, wikis etc.