Making Griffith University's Open Research Statement a reality : first steps

Sharron Stapleton, Library Research Data Specialist, Griffith University Library

Griffith UNIVERSITY
Queensland, Australia

Supporting Open Research at Griffith University

- Open Research Statement
- Open Research Reference Group
- Data management partnerships with Health researchers
- Griffith Research Online repository for publications and high value data collections
- Services support & training

Griffith UNIVERSITY
Queensland, Australia

Griffith University Open Research Statement

“Griffith University aims to make a major contribution to society through high quality, ground-breaking research. Griffith is making an explicit commitment to foster an Open Research culture within the University to help drive greater societal and economic impact from that research. Our research and scholarship will be accessible both within and beyond the academy so as to advance scientific knowledge and understanding, inform public debate, and provide access to the public who fund research through their taxes.

The University’s Griffith Research Online (GRO) repository and other advisory and support services facilitate this commitment to the practice of Open Research. This aligns Griffith with national and international initiatives that foster open publication, as required by funding bodies such as the Australian Research Council and the National Health and Medical Research Council, as well as international funding bodies.

According to the CWTS Leiden Ranking, Griffith ranked 12th in Australia for open access to its research in 2020 and ranked at 281 internationally for open access – Griffith aspires to be in the top 200 by 2025. Collectively, GRO has registered more than 20 million downloads as of 2020. While more than 54 per cent of GRO records provide open access to full text outputs, Griffith can still improve.

The University recognises contributions from researchers at all career stages, working collaboratively across a wide range of disciplines. Across this spectrum, different cultural settings influence both the capacity for, and the appropriateness of, full Open Research. The University supports the academic freedom of researchers to pursue new knowledge, and to choose the best means of dissemination; but within that free choice, the University encourages researchers to make the outputs of their research and, where appropriate, the accompanying data, “as open as possible, as closed as necessary”.”

https://www.griffith.edu.au/library/research-publishing/open-research

Griffith UNIVERSITY
Queensland, Australia

Open research Reference Group (ORRG)

Membership

- 17 researchers, from all disciplines and career stages
- Representatives from eResearch, Office for Research (Ethics) and Library

Draft terms of reference

- Identify perceived barriers to openness in the different disciplines, so that discipline-specific data sharing procedures can be developed
- Inform the development of discipline-specific procedures for content that cannot be openly shared
- Inform the development of discipline-specific advice on open access publishing and preprints
- Inform the development of a communication strategy to promote open research practices at Griffith

Open research Reference Group (ORRG)

Topics

- Barriers to sharing data openly
- Barriers to sharing sensitive data
- Open access publications and pre-prints

Small group discussions held and documented.

Feedback mapped into a common considerations document.

Griffith UNIVERSITY
Queensland, Australia

ORRG – barriers and considerations

Beginning of project

- Ethics & Data Ownership
- Third party data access and sharing
- Participant recruitment
  Informed consent
- Specific data formats & privacy

During project

- Secure data storage
- Organising & documenting data
- Managing sensitive data

Towards end of project

- Open Access options
- Licencing & copyright
- Tracking usage
- Secure data sharing solutions

Griffith UNIVERSITY
Queensland, Australia

Data management partnerships with Health researchers

Developing a strategy to improve data sharing in health research: A mixed-methods study to identify barriers and facilitators

Michelle A Krahe, BA(BiomedSc), PhD, Malcolm Wolski, BBus, MEnvMgt, MinfTech, Sharon Mickan, BOccThy, MA(Educ), PhD, Julie Toohey, BA(Info & Lib Studies), Paul Scuffham, BA, PhD, GAICD, FAHMS, Sheena Reilly, BA(SpPath), PhD, FAHMS, FRCSLT, FSPA, FASSA

Show less

First Published May 5, 2020 | Research Article | Find in PubMed | Check for updates

https://doi-org.libraryproxy.griffith.edu.au/10.1177/1833358320917207

https://research-repository.griffith.edu.au/handle/10072/393621

Research data management in practice: Results from a cross-sectional survey of health and medical researchers from an academic institution in Australia

Michelle A Krahe, BAppSc (BiomedSc), Hons, PhD, Julie Toohey, BAppSc (Info & Lib Studies), Malcolm Wolski, BBus, MEnvMgt, MBIT, Paul A Scuffham, BAppSci, PhD, GAICD, FAHMS, Sheena Reilly, BAppSc (SpPath), PhD, FAHMS, FRCSLT, FSPA, FASSA

Show less

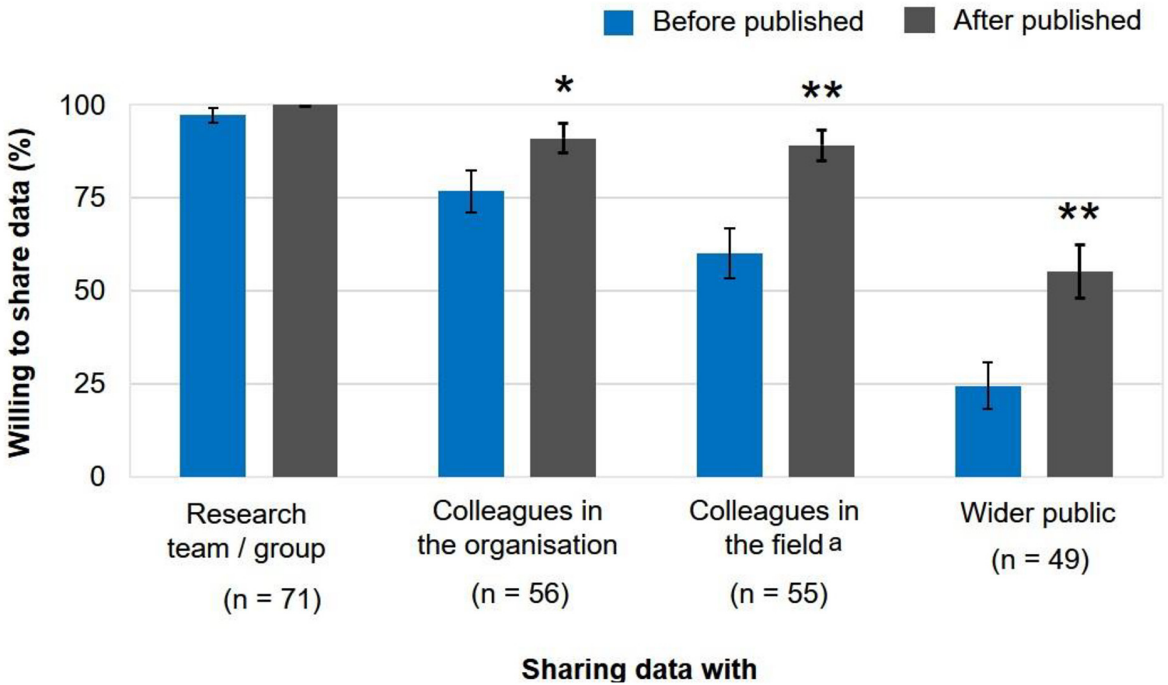
First Published March 11, 2019 | Research Article | Find in PubMed | Check for updates

https://doi-org.libraryproxy.griffith.edu.au/10.1177/1833358319831318

https://research-repository.griffith.edu.au/handle/10072/385998

Griffith UNIVERSITY
Queensland, Australia

When would you share data with….



Reality = 37.7% share data outside team.

Researcher willingness (mean ± SEM) to share research data. [a]Includes internal and external colleagues; *n* represents the denominator excluding "neutral"; *correlation is significant at the 0.05 level (2-tailed); **correlation is significant at the 0.001 level (2-tailed). SEM: standard error mean.

Source: Krahe, M. A., Wolski, M., Mickan, S., Toohey, J., Scuffham, P., & Reilly, S. (2020). Developing a strategy to improve data sharing in health research: A mixed-methods study to identify barriers and facilitators. *Health Information Management Journal*. https://doi.org/10.1177/1833358320917207

Facilitators and Barriers to sharing data

Barriers

- Not understanding the data sharing process
- Not knowing how, where and who to share with
- Lack of time/resources to prepare data for sharing
- Not knowing who is responsible for sharing data
- Protecting the confidentiality and ethical sharing
- Protecting IP from being stolen, or data being misinterpreted or misused

Facilitators

- Trust in the person who is requesting data
- An institutional, funding or publication requirement
- Understanding the public or patient benefit
- Receiving credit and/or increasing the visibility of research

Target behaviours to promote data sharing in health research

1 The researcher understands and is competent to conduct data sharing practices	**2** The researcher prioritises their time and resources to prepare data for sharing	**3** The researcher receives credit and increased visibility of their research following data sharing	**4** The researcher shares data for public and/or patient benefit
5 The researcher shares data to meet funding, institutional and/or journal requirements	**6** The researcher understands their data sharing responsibilities	**7** The researcher understands the way in which confidentiality and safety of data are protected and how to share data ethically	**8** The researcher shares data with trusted and credible people

Source: Krahe, M. A., Wolski, M., Mickan, S., Toohey, J., Scuffham, P., & Reilly, S. (2020). Developing a strategy to improve data sharing in health research: A mixed-methods study to identify barriers and facilitators. *Health Information Management Journal*. https://doi.org/10.1177/1833358320917207

Intervention Functions can influence more than one behaviour

Identify the 'active ingredients'

Use rules to reduce the opportunity to engage in the behaviour

Increase knowledge or understanding

Change the physical or social context

Use communication to induce positive or negative feelings to stimulate action

Create an expectation of reward

Provide an example to aspire to or emulate

Create an expectation of punishment or cost

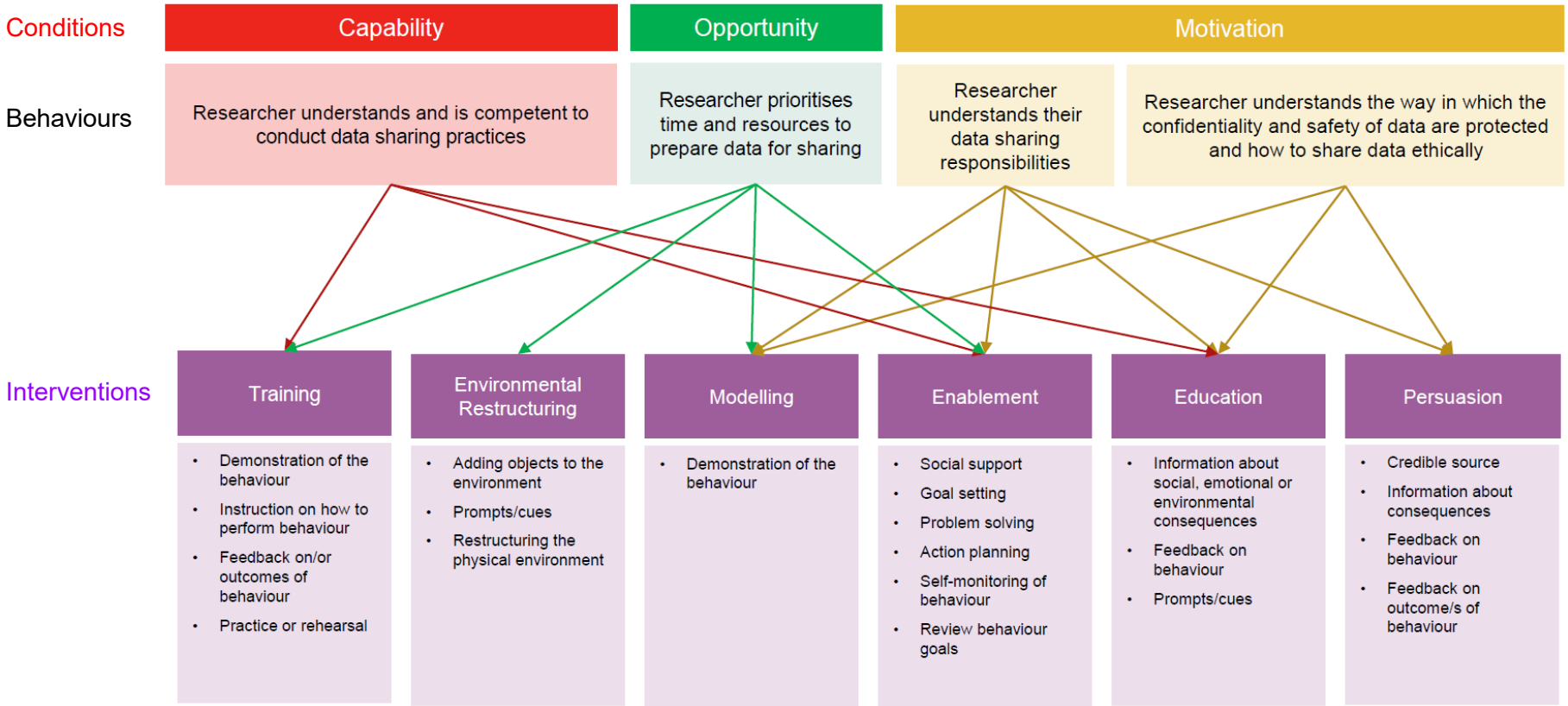
Increase means or reduce barriers to increase capability or opportunity

Impart skills

Adapted from: Michie et al. (2011) *Implementation Science*

Griffith UNIVERSITY
Queensland, Australia

Mapping the behaviours to the interventions



Website content – basic toolkit

Before starting your project | During your project | **Towards the end of your project**

The University supports the academic freedom of researchers to pursue new knowledge, and to choose the best means of dissemination; but within that free choice, the University encourages researchers to make their research outputs and, where appropriate, the accompanying data, "as open as possible, as closed as necessary".

- Post pre-peer reviewed manuscripts to preprint servers:
  - arXiv
  - BioRxiv
  - MedRxiv
  - ChemRxiv
  - socARXiv
  - RePec
  - Github

  Read more about pre-prints in Nature
- Publish in open access journals or books
- Deposit your research outputs in Symplectic Elements to make them FAIR via the University repository, Griffith Research Online (GRO)
  View the guide
- Share data and code via open repositories
  - Figshare
  - Dryad
  - Zenodo
  - Australian Data Archive
- Make data available by mediated, secure and ethical methods
- Share your research findings by traditional or social media
  Write for The Conversation
- Participate in media broadcasts as an expert commentator
  Get advice from the Media and communciations team

Griffith UNIVERSITY
Queensland, Australia

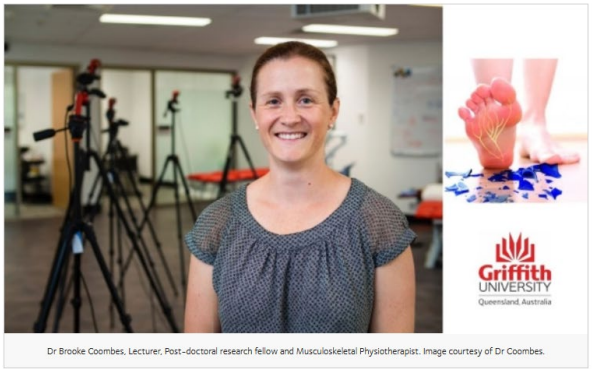
Researcher advocates

- democratised access to scholarly and research outputs
- greater opportunities for research collaboration
- new opportunities for innovation and further research
- increased transparency of research processes
- improved research validation and study replication
- efficiencies in decision support
- increasing public trust in science.

https://www.griffith.edu.au/library/research-publishing/open-research/engage

Griffith UNIVERSITY
Queensland, Australia

Library blogs featuring open research



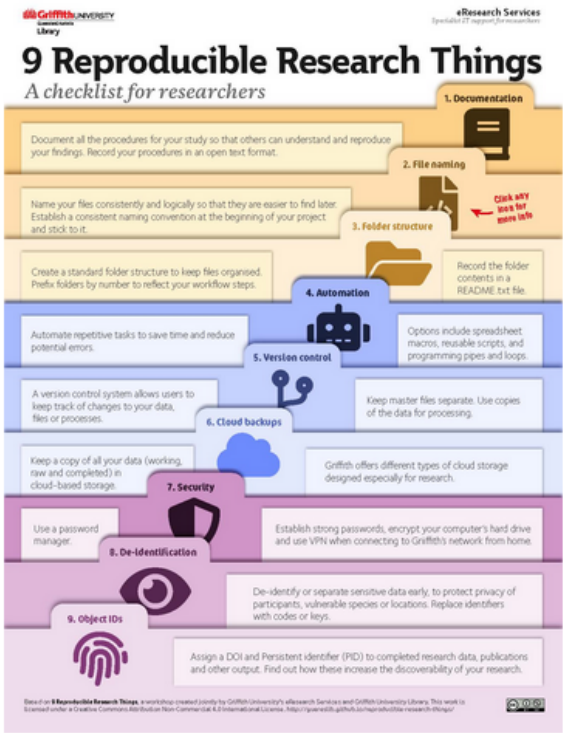
Boulton, Susan. (2020). Social Engagement and Institutional Repositories: A Case Study. Insights 33 (1): 12. DOI: http://doi.org/10.1629/uksg.504

Checklists – Reproducible Research

Ensure your research can be successfully replicated by others, work through this checklist:

- Documentation - Document your study's procedures, allowing others to understand and reproduce your findings. Record in an open text format.
- File naming - Establish a consistent naming convention at the start of your project. Name files consistently and logically to enhance retrieval.
- Folder structure - Create a standard folder structure for organising files. Prefix folders by number to reflect your workflow steps. Record the folder structure in a README.txt file.
- Automation - Automate repetitive tasks (including spreadsheet macros, reusable scripts, and programming pipes and loops) to save time and reduce potential errors.
- Version control - Incorporate a system that allows you to keep track of changes to your data, files or processes. Keep master files separate and use copies of the data for processing.
- Cloud backups - Keep a copy of your data (working, raw and completed) in cloud-based storage. Compare the different Griffith Research Storage options.
- Security - Establish strong passwords and use a password manager. Encrypt your computer's hard drive and connect to the Griffith network using VPN when off-campus.
- De-identification - De-identify or separate sensitive data early, to protect participants privacy, vulnerable species or locations. Replace identifiers with codes or keys.
- Object IDs - Assign a DOI to completed research data, publications, and other outputs to make discoverable.

Learn how >



https://www.griffith.edu.au/library/research-publishing/open-research/make-research-open

Training – open source tools and materials

data wrangling intro Setup Intro Create Layout Facets Filter GREL

Introduction to Data Wrangling with OpenRefine

OpenRefine is an open source tool to explore, clean, organise, combine and transform data.
OpenRefine is particularly powerful when working with large datasets.

Learn basic data cleaning techniques in this self-paced online workshop such as:

- Exploring tabular data through facets and filters
- Implementing 'tidy data' principles
- Cleaning, organising and preparing data for analysis
- Extracting and using a script to automate wrangling on similar data

Download the software and dataset, do activities and watch videos to guide you through the lessons
Give yourself around 2 1/2 hours to complete the workshop.

Adapted from Data Carpentry & Library Carpentry lessons.

https://griffithunilibrary.github.io/intro-data-wrangle/

LimeSurvey at Griffith Prep Setup Questions Conditions Arrays Quotas

Online Research Survey Tool

LimeSurvey logo

Hi! This site is designed as a companion to Griffith Library's Lime Survey workshop, presented in collaboration with Griffith RED.

It can also be treated as a standalone, self-paced tutorial.

LimeSurvey is a fast, free, flexible and secure survey application that is available to you to assist with your research. This workshop is designed to be taken as a series of online videos and exercises, followed by a Q&A workshop. The PowerPoint slides can be found below.

https://griffithunilibrary.github.io/limesurvey/

creative commons

Github & Gitpages

Griffith UNIVERSITY
Queensland, Australia


THANK YOU
Questions?
Griffith UNIVERSITY
Queensland, Australia