



Research Data Support: Quick Guide 5

OPEN RESEARCH AT EDINBURGH

WHAT IS OPEN RESEARCH?

Open Research (also known as Open Science, especially in a European context) is not a single thing, but rather comprises a set of general principles and behaviours. You do not need to follow all of its tenets in order to practice Open Research. Entirely open approaches will not be suitable for all types of research, especially work dealing with ethically or commercially sensitive content; however, “Open by default” is an increasingly common approach. This is often expressed in the maxim: **“As open as possible, as closed as necessary.”**

THE ‘PILLARS’ OF OPEN RESEARCH

Publications

Open Access to publications is a key component of Open Research. Free and instant access to publications improves the speed of innovation and leads to better cooperation and progress in solving scientific and societal challenges. To publish openly, you'll need to be able to source an appropriate Open Access (OA) journal or discipline specific repository and interpret their publishing agreements. You should also consider sharing preprints of your work as a means of getting early feedback and community validation of your approaches. In some cases, you'll need to pay an Article Processing Charge (APC) to publish in an OA journal.

- UoE Scholarly Communications Open Access: <https://www.ed.ac.uk/openaccess>

Data

Data-driven research is fast becoming the norm in all disciplines. To support validation of your findings and allow others to build upon your work, you first need to make sure that others can discover your data. This means putting datasets into a repository that supports public searching; giving them unique identifiers (such as DOIs) and linking datasets to your papers; being clear about what others are allowed to do with them by including a data access statement in your papers, and applying a suitable licence (such as Creative Commons) to your data.

- UoE DataShare open data repository: <https://datashare.is.ed.ac.uk/>
- UoE's Pure current research information system, used to record all types of research outputs: <https://www.ed.ac.uk/information-services/research-support/research-information-management/pure>
- Creative Commons guidance on licensing data: <https://wiki.creativecommons.org/wiki/data>



Code

When sharing your software and code, be sure to make use of open source standards to support interoperability and longer-term viability. Put your code somewhere that others can search for it and access it (such as GitLab), and be clear about the licence under which the code is shared.

- UoE GitLab software versioning: <https://www.digitalresearchservices.ed.ac.uk/resources/gitlab>
- Open Source Initiative guidance on software licensing: <https://opensource.org/licenses>

Reviews

The peer review process is evolving. By making the peer review process more transparent, researchers have faster access to peer feedback, and consumers of research outputs can have greater confidence in their quality. Decoupling peer review from large, and often slow, commercial publishers enables innovative publishing and collaborative platforms to flourish.

- UoE Open Journals System: <http://journals.ed.ac.uk/>
- Faculty of 1000 (F1000) open publishing and review platform: <https://f1000.com/>

OPEN RESEARCH BENEFITS

For society

Practising Open Research makes a greater number of research outputs accessible to everybody, rather than stuck behind paywalls. This helps ensure a level playing field, regardless of a researcher's geographical location or economic situation, and supports knowledge transfer, research integrity and transparency. Open Research also speeds up collaborative approaches to major global challenges, such as the Covid-19 pandemic.

For you

Making your research outputs Open does require some additional effort, but it can benefit you as well. By publishing data and code as well as papers, you are essentially tripling the number of potentially citable outputs for every project that you work on. Your research will be more visible and understandable to others, which can increase your citation rate and research impact. Greater visibility fosters new collaborations and research partnerships, boosting your profile and helping you move forward in your career.

CONTACTS AND RESOURCES

- OECD Policy Responses to Coronavirus (Covid-19) - Why open science is critical to combatting COVID-19: <http://www.oecd.org/coronavirus/policy-responses/why-open-science-is-critical-to-combatting-covid-19-cd6ab2f9/>
- A set of case studies, focused on citizen science, bioinformatics and drug discovery, illustrating how open research outputs and open science can be incorporated into a range of innovative projects/initiatives: <https://openinnovation.is.ed.ac.uk/open-science/>
- FOSTER Open Science Training Handbook: <https://book.fosteropenscience.eu/en/>
- Contact Scholarly Communications team: email scholcomms@ed.ac.uk or via the IS Helpline
- Contact Research Data Support team: email data-support@ed.ac.uk or via the IS Helpline



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