Keele University
PGR Open Research Award 2021 — Guidelines

Keele University supports Open Research in all its forms as set out in Keele's Statement on Research Transparency (see Appendix B). As part of this commitment to Open Research, we have established a PGR Open Research Award which is now open to submissions from all postgraduate research students in all disciplines across the University.

The PGR Open Research Award recognises and rewards postgraduate research students who have made—or who demonstrate concrete plans to make—strong contributions to the principles of Open Research in their doctoral studies.

The prize consists of £50, and the winner will be invited to give a short presentation of their winning case study at the PGR annual conference. In addition, a summary of all shortlisted case studies will be posted on the Keele University Research webpages.

How to Apply

Applicants should prepare a written case study of **no more than 2 pages (Arial font, minimum 12-point font size)** using the template headings in Appendix A. Each case study should describe how the applicant has engaged in (or plans to engage in) one or more of the Open Research practices listed below.

A panel of judges will assess all applications and will identify a shortlist of candidates. The winner will be announced at the annual PGR conference.

Submissions should be sent to **Dr Jim Grange** (Academic Lead for Research Integrity & Improvement). The closing date for applications is **12:00 noon on Wednesday 12th May 2021**.

Open Research Practices

All case studies should describe how the applicant has engaged in (or plans to engage in) one or more of the Open Research Practices listed below.

- Using publication under an open licence to disseminate research outputs. This may include a range of outputs, including (but not limited to) publications, data, software code, web resources etc.)
    - For a primer on Open Access publishing, see https://osf.io/94rsp/
    - For a primer on Open Data, see https://osf.io/wp4zu/
    - For a primer on Open Software and Open Code, see https://osf.io/qw9ck/
- Disseminating research findings as a pre-print, either independently of formal submission to a journal, or as part of a journal's open peer review procedure.
    - For a primer on Pre-Prints, see https://osf.io/m4zyh/

- Providing an open peer review of manuscripts submitted under a formal peer review process managed by a publisher.
- Creating a public pre-registration of a study design or publishing a study as a Registered Report.
    - For a primer on Pre-Registration and Registered Reports, see https://osf.io/8v2n7/
- Publishing a data paper or a software paper.
- Incorporating open and participatory methods into the design and conduct of research. For example, by:
    - Creating a project using a “citizen science” online platform
    - Using open notebook-based methods
- Introducing Open Research concepts and practices into teaching and learning.
- Creating new tools or technologies to facilitate Open Research practices (e.g., for combining or repurposing data sets and other research outputs from different locations or disciplines, or for mining content).
- Undertaking activities to develop the environment for Open Research. For example, by:
    - Organising journal clubs about Open Research
    - Engaging in citizen science outreach
    - Engaging in communications about Open Research with key stakeholders

Case Study Examples

To provide some inspiration, here are some examples of suitable subjects for case studies. This list is not exhaustive.

- You have publicly shared data / software / research materials underpinning key components of your doctoral study.
- You’re a humanities researcher who has created an open web-based resource and consider the practicalities and challenges of sustaining long-term access and usability.
- You have engaged with pre-registration of key studies in your PhD and discuss the challenges presented.
- You’re a qualitative social scientist researching sensitive issues and you discuss the ethical and practical challenges to sharing your data.
- You have participated in a community group to develop data or meta-data

Discipline Heterogeneity Around Open Research

We understand that different disciplines currently have different cultures and expectations around engagement with Open Research practices. These discipline differences will be fully taken into account when considering all applications.

The Judging Panel

All applications will be considered by the following short-listing panel, which comprises the Research Integrity and Improvement team here at Keele.

- Dr Jim Grange (Academic Lead for Research Integrity & Improvement)
- Dr Mark Eccleston-Turner (Faculty of Humanities & Social Sciences Research Integrity Champion)
- Dr Sarah Hart (Faculty of Medicine and Health Sciences Research Integrity Champion)
- Dr Sue Sherman (Faculty of Natural Sciences Research Integrity Champion)
- Dr Charlotte Hulme (Keele's UK Reproducibility Network's Local Lead)
- Dr Tracy Nevatte (Head of Project Assurance and Associate Director of Research Support)

Appendices Follow…

The criteria for this prize have been established in collaboration with other member institutes of the UK Reproducibility Network. Particular thanks are due to University of Reading and Bristol University for sharing their Open Research Prize criteria.

Appendix A — Case Study Template

Name of applicant:

School:

ORCID[1]:

Please indicate that you have discussed this application with your supervisor, including discussion of any relevant ethical issues around any proposal for engaging in Open Research: ("Yes" response is sufficient)

Summary of Contribution / Planned Contribution (100 word abstract)**:**

What did you do? / What do you plan to do?[2]

Why did you do it? / Why do you plan to do it?[1]

How did you do it? / How will you do it?[1]

What barriers or challenges did you have to overcome? / What barriers or challenges do you anticipate you will have to overcome? [1]

What does it mean for you and your research?

How might your findings / approach help other researchers?

Additional information: Please feel free to add hyperlinks to point to external resources etc., but please note that the panel will be assessing the contribution exclusively

---

[1] An ORCiD (Open Researcher and Contributor ID) is a unique ID number which can be used to associate authors with their works. Researchers are increasingly adopting ORCiDs, and they are useful to differentiate research outputs by people with the same or similar names, enhancing the integrity of the scientific record. You can create an ORCID here: https://orcid.org/register

[2] Delete as appropriate depending on whether your case study is reporting on activities already conducted or reporting planned activities.

Appendix B
Keele University Statement on Transparency in Research

Approved at University Research Committee (May, 2020)

Keele University is committed to transparency and rigour in research across all disciplines, and to continue to improve the ways in which we conduct research. This is part of our broader efforts to enhance the quality of research practice, as outlined in related Keele University positions:

- Keele's Research Strategy emphasises the highest standards of rigour and integrity in research, including a commitment to open research and ensuring open access to research outputs.
- Keele's Statement on Research Integrity sets out our commitment to the highest standards of integrity in all aspects of research, as well as setting out how we meet our commitment to the UUK concordat for research integrity.

Expectations of Keele Researchers

Approaches to Transparency

We recognise that actions that support transparency in research and scholarship vary considerably across disciplines and methodologies. Therefore, we expect researchers to pursue transparency through the most effective and appropriate means, according to the nature of their research. In addition to pursuing transparency more broadly, there remains the expectation that all potential conflicts of interest should be declared, in line with Keele's policy.

Open Research

Making research "open" is a core part of research transparency, and engagement with open research practices are rewarded in promotion decisions. We recognise that there is significant variation across disciplines, influencing how appropriate open research practices may be. With this in mind—as far as is possible and appropriate—we expect researchers to:

- make their **research methods, software, raw data, and outputs open**, and available at the earliest possible point in the research stream;
- describe their data according to FAIR data principles, which ensures data are Findable, Accessible, Interoperable, and Reusable;
- deposit their outputs in **open access repositories:**
    - publications in repositories such as Symplectic (for final post-peer review author copies of manuscripts) and preprint servers (for pre-peer review and also for final post-peer review author copies of manuscripts);
    - research data in repositories such as the Keele Data Repository. Where subject-specific repositories are used, we recommend using repositories

that meet *Nature Scientific Data's* trusted repository criteria, such as these recommended repositories;
    - software in suitable repositories, such as GitHub.

We note that exceptions exist where research data should not or cannot be shared, and we therefore recognise the principle of "*as open as possible; as closed as necessary*". There are many examples where data should not be open. For instance:

- researchers may be allowed access to **private archives** on the condition that the records accessed are not made open;
- data pertaining to research participants should only be shared when this is in line with **ethics and privacy policies** associated with the research, consent has been obtained in line with guidelines, and the data can be fully anonymised;
- in some cases research participants may have agreed to certain data—such as **merged data**—being shared but not individual data, such as transcripts;
- the data could be **misused** by others with the intention of causing harm;
- it may not be possible to share fully raw data for practical reasons, such as the size of the data. Data should be at a **level of granularity** that is feasible to share, while also enabling research methods or results to be reproduced as comprehensively as possible;
- it may be necessary to delay publication of research outputs and research data to allow for **protection of intellectual property**, for example through patenting;
- publication of research data or outputs may breach **confidentiality of collaborating parties** or require their consent under the terms of a collaboration agreement.

Reproducibility

The reproducibility of both research methods and research results (see Appendix for definitions) is critical to research in most contexts, particularly in the experimental sciences with a quantitative focus. Reproducibility forms part of Keele's wider commitment to transparency and rigour in all of our research. We recognise that behaviours in support of transparency and rigour vary considerably across disciplines and methodologies, and we therefore encourage our researchers to adopt actions most appropriate to their disciplines.

It may be more useful to refer to transparency or academic rigour in the use of research methods and in the whole research process—from the collection of evidence or thoughts through analysis to final conclusions and the publication of findings.

The reproducibility of research methods is required for research to be replicated (see Appendix for definitions). This is essential in research contexts where findings must be robust and reproducible in order to form a solid foundation on which to build further knowledge. In research contexts where reproducibility is possible and appropriate, we strongly encourage researchers to use measures that support it. These include (but are not limited to):

- **pre-registration** of study procedures and analysis plans, and use of **registered reports** where appropriate;
- transparent **reporting** of research in line with recognised community guidelines;
- disclosure of **all tested conditions**, analysed measures and results;
- transparency around **statistical methods** (including sample size planning and statistical assumptions and pitfalls);
- use of **preprints** to facilitate the timely communication of scholarly output**;**
- Conducting—and valuing in promotion / hiring decisions—**replication studies;**
- publication of **"null" findings**.

Munafò et al. (2017) have produced a summary of initiatives that support reproducibility. For a comprehensive transparency checklist that can be used to improve and document the transparency of research outputs, see Aczel et al. (2020).

Keele's Work to Promote Transparency in Research

Keele is committed to supporting transparency in research and to developing approaches to improve the quality of the research we produce. This includes:

- continuing to **support open research** and engaging with the necessary cultural change
- the development of **governance processes** to enable research outputs to be **found, accessed, and reused appropriately** when open sharing is not appropriate
- the development of additional **training**—including in research methods—and consideration of how to promote transparency in academic teaching at all levels
- improving the **sharing of knowledge and best practice** across Keele through Faculty Champions for Research Integrity.

See Keele's webpage on Research Integrity & Improvement for more information, resources, and details of the support Keele offers. Contact us at research.integrity@keele.ac.uk with any questions or suggestions.

Appendix C — Definitions

This appendix provides definitions of key terms used in this paper.

Transparency

Research is transparent if the methods, analysis and data are reported and disseminated openly, clearly and comprehensively.

Integrity

Research has integrity if it has been conducted, analysed, reported, and disseminated honestly and to a high standard, ensuring that the research and its findings can be trusted.

Reproducibility of Results

The findings of a research study are **reproducible** if the same inferential outcome is obtained in an independent analysis using the original raw data and following the same analysis method described by an original study.

Reproducibility of Methods

A research investigation is reproducible if sufficient detail about the methods and data used is provided, so that the study can be independently repeated as it was originally conducted.

Replication Study

A replication study aims to test the reliability of a prior study's findings. It usually involves repeating the original study using the same methods, but involving different data or a new context, to confirm whether the study's conclusions are applicable to other circumstances. Alternatively, a replication study may use the original data and context in an effort to reproduce the original study and its results.

Replicability

A research study is replicable if its results can be obtained in an independent study using the same methods as those in the original study but using different data or a new context.

Robustness

Research findings are robust if they can be consistently produced a) across a range of tests within a research study, and/or b) across different research studies that involve variations in assumptions, variables or procedures.