

Keele University's Annual Statement on Research Integrity 2020-21

Introduction

Research integrity is one of the strategic pillars of Keele University's overarching [Research Strategy 2020](#). Our commitment is to the highest standards of research integrity through maintaining a research environment that supports and develops our researchers, with clear processes for responding to allegations of research misconduct.

The [Named Person](#) responsible for research integrity and reproducibility at Keele University is the Pro-Vice Chancellor for Research and Innovation who is the first point of contact for further information or support about matters of research integrity and reproducibility. Alternatively, the Academic Lead for Research Integrity and Improvement at Keele University and the Director of Research Strategy Delivery (Research Integrity administrative lead) can be contacted. This Research Integrity Group can be contacted through the dedicated email account: research.integrity@keele.ac.uk.

Statement

Keele University is committed to ensuring the highest standards of research integrity in all aspects of its research activities and expects its researchers to maintain a similar commitment. Keele University welcomes the [UUK Concordat to Support Research Integrity](#) and supports the five commitments contained within the Concordat.

Quality Management System

The University recognises the need to ensure standards and legislative requirements are met in a consistent and robust manner. The University has a Quality Management System in place to manage compliance with the standards governing our research activity. This Quality Management System comprises three main aspects:

- (1) the University's **policies and procedures** to define the standards and outline processes by which those standards are applied;
- (2) the **training and development** of research staff, to support them in applying and promoting these standards in their research; and
- (3) processes and mechanisms by which the University maintains **oversight** of the ongoing application of these standards and investigates concerns about research integrity.

The five key elements of research integrity (honesty, rigour, transparency and open communication, care and respect, and accountability) outlined in the Concordat are reflected in the University's Quality Management System.

Policies and Procedures

The [Keele University Research Integrity Policy](#) is part of the overarching Quality Management System. The University has a [Code of Good Research Practice](#) and a [Code of Practice for Student Academic Misconduct](#) which outline the University's expectations of the behaviour of all staff and students engaged in research. These documents also include the definition of misconduct in research. The code reflects a number of other policies including:

- Data protection
- Management of conflicts of interest
- UK Policy Framework for Health and Social Care Research
- Research data management
- Research ethics

Where an area of work represents a significant risk or there is otherwise a requirement for it, the University will specifically describe processes required to meet standards or legislative requirements through standard operating procedures (SOPs). SOPs are subject to periodic review to reflect changes in legislation, regulatory and funder requirements as well as evolving research practice. Currently, the University has SOPs in the following areas:

- Clinical research, particularly Clinical Trials of Investigational Medicinal Products
- Scientific research involving the use of animals
- Research involving human participants, their data or bodily material
- Open Access to research publications
- Ethics Committee review of research

These policies are reviewed on a regular basis to ensure they meet the requirements of our evolving research portfolio and can be found on the [University's Research Integrity webpages](#) and [Policy Zone](#). Communications on research ethics and integrity processes are made to staff and students through the University's internal communications channels. Research integrity is a standing item on the University and Faculty Research Committees.

In addition to this, Faculties are encouraged to develop local processes to promote a culture of research integrity; these may include:

- Peer review processes
- Symposium/Seminar series and academic discussion
- Engagement with research transparency, including (but not limited to):
 - Pre-registration of study protocols
 - Open access to research data
 - Open access to research materials
 - Open access to research software / analysis scripts
- Ethics Committee review of research

Keele is committed to the principle that researchers should publish their results freely, ensuring their work is available to other researchers and the public. The University proactively publishes publicly-funded research outputs through its [research repository](#), and actively manages situations where restrictions exist on publication accessibility. Currently, around 83% of the content on the repository is freely available to all through open access publication.

The University also has a [repository for research data](#) underpinning published research made available for open access. It builds on and greatly facilitates existing good practice within the University as highlighted by key stakeholders in recent publications.

Keele is committed to supporting transparency in research and to developing approaches to improve the quality of the research we produce. As part of this, Keele has developed a [Statement on Transparency in Research](#) which sets out key expectations of Keele researchers to engage with Open Science and Reproducibility best-practice. Such best practice includes Open Data (public sharing of data underpinning our publications), Open Materials (public sharing of research methods / analysis scripts / software) underpinning our research, as well as engaging in pre-registration of study protocols and analysis plans, where appropriate.

Keele is also committed to recognising and rewarding engagement with Open Science and Reproducibility best practices in its promotion and hiring decisions. Our promotions criteria encourage candidates to comment on their engagement with Open Science and Reproducibility best-practice in their applications. Keele has also developed a Statement on Responsible Research Assessment to guide hiring and promotion committees in the responsible use of bibliometric data. Keele is also a signatory of the San Francisco Declaration on Research Assessment (DORA) which emphasises the assessment of research on its own merits rather than relying on bibliometric data (such as journal impact factor).

Training and Development

The University recognises that the ultimate responsibility for personal and professional development of researchers lies with the individual and provides a supportive environment with open access to opportunities for training or personal

reflection. The University benefits from membership of Vitae and the UK Council for Graduate Education (UKGCE) and benchmarks development opportunities against the Researcher Development Framework in order to develop more effective and successful researchers with a specific emphasis on research integrity.

The University seeks to ensure that all researchers are aware of and understand the policies and principles relating to ethics and integrity. The University supports researchers through the provision of learning and development opportunities to ensure compliance with policy in mandating training in certain key areas.

The training programme provides opportunities for recommended training in areas supporting research integrity such as:

- Good Clinical Practice as legislated by the Medicines for Human Use (Clinical Trials) Regulations
- Data Protection Act and Freedom of Information Requests
- Discipline specific research methodology and ethical considerations
- Publications and presentations
- Intellectual Property management including conflicts of interest and transparency
- Animals (Scientific Procedures) Act
- Human Tissue Act
- Plagiarism and Research Misconduct
- Information Security

The University recognises the need for a flexible and dynamic training package to respond to changes in research focus in the staff and student populations, as well as external forces such as changes in legislation or funder requirements.

The University's research integrity training needs are held under review by the Research Committee.

The [Research Governance Toolkit Research Integrity webpage](#) has been updated.

Research integrity training is available to postgraduate research students. As part of the PGR Summer School an introductory session on, integrity, research governance and ethics explains the differences between the three and when each is relevant along with real-time examples and support for students to think about their own projects.

An Academic Lead for Research Integrity and Improvement at Keele along with Faculty Research Integrity Champions for each Faculty have been appointed. These individuals continue to work with the Pro-Vice Chancellor for Research and Innovation and the Head of Project Assurance to foster a stronger culture of research integrity and reproducibility at Keele. The Academic Lead and Faculty Research Integrity Champions are members of the Research Leaders Network at Keele and their respective Faculty Research Committees.

In the 2020-21 academic year, the team have provided various advances. The focus has primarily been on enhancing engagement with open research practices. The team conducted an institution-wide survey to quantify current awareness and understanding of various open research practices, as well as providing a snapshot of current engagement levels. The data—broken down by faculty and career stage—has helped identify several priorities for training and development to support our researchers. The team have used this data to develop a 3-year Open Research Action Plan which will inform priority-setting over the next three academic years.

Engagement with open research and reproducibility is fully embedded within the academic promotions criteria, providing clear incentives for researchers to engage with best-practice. The faculty champions continue to meet with School Research Directors to understand and address barriers to engaging with open research, informed by data from the open research survey. As part of these conversations, faculty priorities around research integrity and improvement are being established, which will be the focus for 2021-22. Progress has been made clearly already in some faculties, where explicit mention of open research, reproducibility, and research integrity more broadly is appearing in strategic documents. The team have also commenced trialling researcher-prompts within the Symplectic system around open data.

The team also established the inaugural PGR Open Research prize at the KDA annual conference; this was an opportunity to highlight and celebrate the achievements of career-young researchers who are engaging with innovative open research practices. The prize was shared between two excellent applications from the School of Psychology, Faculty of Natural Sciences.

Keele was also involved in a [successful £4.5million grant from Research England’s Development Fund](#). The five-year project will develop and evaluate high-quality training in open research, and to develop and evaluate institutional best-practice around supporting engagement with open research and reproducibility issues. The institutional lead for research integrity and improvement sits on the management team of this grant.

The institutional lead for research integrity and improvement—together with some colleagues from other UKRN partner institutions—submitted evidence to the [UK Parliament’s Science & Technology Committee’s inquiry into reproducibility and research integrity](#) (Evidence number RRE-0043).

Governance and Oversight

Keele University’s [Research Committee](#) oversees the integrity of the University’s research on behalf of the University Executive Committee, [Senate](#), and [Council](#), and will review and approve this statement.

Research Misconduct

The University provides assurance that the processes in place for dealing with allegations of misconduct are transparent, robust and fair and that they are appropriate to the needs of the organisation. The University has a policy for the investigation of allegations (LINK) of research misconduct which is currently under review following the release of the revised concordat to support research integrity.

Research Misconduct Investigations

	Number of informal investigations completed			Number of formal investigations completed			Number of allegations upheld (in whole or part)		
	2015-2019	2019-2020	2020-2021	2015-2019	2019-2020	2020-2021	2015-2019	2019-2020	2020-2021
Fabrication	0	0	0	0	0	0	0	0	0
Falsification	0	0	0	0	0	0	0	0	0
Plagiarism	0	0	0	0	0	0	0	0	0
Failure to meet legal, ethical and professional obligations	0	0	0	0	0	0	0	0	0
Mis-representation	0	0	0	0	0	0	0	0	0

Breach of duty of care	0	0	0	0	0	0	0	0	0
Improper dealing with allegations of misconduct	0	0	0	0	0	0	0	0	0
Other	0	0	0	1	0	0	0	0	0

Table 1 - Summary of investigations into allegations of research misconduct. Informal investigations are those that were received and upon review of the details and evidence it was decided that a formal review was not appropriate and that the Faculty Dean for Research would meet with the individual(s) involved and provide support and mentorship. Formal investigations involve a panel to review the allegation and decide on appropriate outcomes.

Future Developments

During the 2021-22 academic year, the Pro-Vice-Chancellor for Research and Innovation, the Academic Lead for Research Integrity and Improvement, the Faculty Research Integrity Champions and the Director of Research Strategy Delivery will work together to deliver the following:

Open Research

Open research will continue to be a priority for the team. Maximising the transparency and openness of the research pipeline is essential to maximise the integrity and impact of the work conducted at Keele University and its partners. Engagement with Open Research practices aligns closely with UK research funders—including [UKRI](#)—who are increasingly expecting full compliance and engagement with development of Open Research practices. The team have

Our three-year Open Research Action Plan provides priorities for the 2021-22 academic year the following five themes:

1. Training Researchers

- Develop & trial “Introduction to Open Research” course for Year 1 & Year 2 PGR students via the KDA
- Develop & trial “Introduction to Open Research at Keele” course for academic and research/research support staff through Keele’s Learning Pool. The aim is for this to become mandatory training for new starters by 2022/23.
- Conduct scoping exercise of faculty needs for specialised training modules for academic research staff & PGR students around more-advanced Open Research practices (e.g., pre-registration).
- Conduct scoping exercise of sufficiency of statistical skills training to (relevant) PGR students. Identify gaps and needs within each faculty.

2. Developing Researchers

- Establish faculty-wide Open Research Networks, an informal collection of parties interested in open research matters. As part of this, via the UKRN local lead, the team will establish [ReproducibiliTea journal club](#) events.
- Support researcher-led projects/initiatives to drive uptake of engagement with open research locally (targeting one project per faculty).
- Establish Open Research Award for Research/Academic staff
- Repeat the Open Research Award for PGR students
- Identify one Open Research Case Study per faculty, for internal communication and website presence.

3. Infrastructure

- To ensure adequate costing within eligible grant applications for activity around maximising open research compliance, the team will conduct a scoping review of baseline inclusion of open research activity in applications.
- To develop and enhance awareness with School Research Directors to engage with early drafts of grant applications to ensure open research activity is represented and costed in eligible grants.
- To develop recommendations for template Data Management Plans providing overview of institutional commitment to open research.

- d. To implement and monitor engagement with open data prompt within Symplectic systems.
- e. To conduct a scoping review and horizon scan of existing provision—both at Keele and externally—of open research output (i.e., open access papers) and open data repositories.
- f. Develop & maintain Open Research webpages, to house training material, case studies, policy documents, and news.

4. Embedding open research in institutional practice

- a. To conduct consultation with Research Deans and School Research Directors how best to embed open research culture and practice within research planning at Faculty, School, and individual researcher level.
- b. Develop recommendations—informed by best practice—of how to embed open research criteria within academic recruitment practices.
- c. Review current practice and develop recommendations for embedding open research best practice within research ethics applications.

5. Establishing and nurturing external partnerships

- a. To continue fruitful collaboration with UKRN partner institutions.

Research Misconduct Procedure

A review and update will be conducted of this procedure.