Research Practice

Principles of Good Research Practice

Northumbria University strives to uphold the highest standards of ethical practice in research and academic integrity. Irrespective of the nature and ethical complexity of a research project, staff and students are expected to ensure that their conduct is driven by the ethical imperative of respect, the intent to do no harm and to contribute to society's knowledge and practice through engagement in research that has beneficent intent.

To achieve a high quality research culture, the following key elements are promoted:

- Respect for the dignity, rights, safety and well-being of participants and researchers
- Valuing diversity in society
- Personal and scientific integrity
- Leadership
- Honesty
- Accountability
- Openness
- Clear and supportive management.

To achieve this, and in line with meeting its responsibilities as a sponsor of research (DH Research Governance Framework for Health and Social Care 2nd edition 2005), the University is responsible for:

- Compliance with all current employment, equality and diversity, and health and safety legislation
- Demonstrating the existence of clear codes of practice for staff, and mechanisms to monitor and assess compliance
- Ensuring that investigators and other research staff are aware of, understand and comply with appropriate governance frameworks
- Demonstrate systems of continuous professional development of staff at all levels
- Having agreements and systems to identify, protect and exploit intellectual property
- Ensuring that they are able to compensate anyone harmed as a result of negligence on the part of staff, students and others for whom they have liability; and, if they have agreed to do so, to compensate participants for non-negligent harm arising from research
- Having systems in place to detect and address fraud, and other scientific or professional misconduct by staff
- Having systems to process, address and learn lessons from any errors or complaints brought against their employees
- Permitting and assisting in any statutory inspection, audit, or investigation arising from errors or complaints associated with their employees

Further guidance and practice in this area can be found in the UK Research Integrity Office Code of Practice here.

World Conferences on Research Integrity

The World Conferences on Research Integrity Foundation (WCRIF) was established in July, 2017, as a non-profit organisation with official seat in the municipality of Amsterdam, The Netherlands. The purposes of the World Conferences on Research Integrity Foundation (WCRIF) includes:

- promote the continuation of the World Conferences on Research Integrity;
- ensure organisational continuity between conferences;
- maintain a World Conferences on Research Integrity website; and
- publish or disseminate guidance or policies agreed to at World Conferences on Research Integrity

Further details can be found here.

The **Singapore Statement on Research Integrity** is the outcome of the 2nd World Conference on Research Integrity, held 21-24 July 2010.

The four principles of responsible research set out in the statement are

- Honesty in all aspects of research
- Accountability in the conduct of research
- Professional courtesy and fairness in working with others
- Good stewardship of research on behalf of others

Further information can be found here.

The Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations is the outcome of the 3rd World Conference on Research Integrity held 5-8 May 2013.

The statement offers guidance on integrity in cross-national, cross-disciplinary and cross-sector research. Research collaborations that cross national, institutional, disciplinary and sector boundaries are important to the advancement of knowledge worldwide. Such collaborations present special challenges for the responsible conduct of research, because they may involve substantial differences in regulatory and legal systems, organisational and funding structures, research cultures, and approaches to training. It is critically important, therefore, that researchers be aware of and able to address such differences, as well as issues related to integrity that might arise in cross-boundary research collaborations. Researchers should adhere to the professional responsibilities set forth in the Singapore Statement on Research Integrity in addition to additional responsibilities detailed here.

The **Amsterdam agenda** is the outcome of the 5th World Conference in Research Integrity held 28-31 May 2017.

The aim was the greater emphasis on the assessment of efforts to improve integrity in research and the use of empirical information in developing research integrity policies. To achieve a "Registry for Research on the Responsible conduct of Research" (RRRCR) will be established. The RRRCR will seek to encourage researchers to plan, conduct, report and share their research around six key elements which are detailed here.

Authorship Contribution, Principles and Guidelines for Research Publications

Definition of Authorship

The "publish or perish" culture has encouraged bad practice around authorship. Northumbria University subscribes to the Singapore (2010) Statement on Research integrity which states:

"Researchers should take responsibility for their contributions to all publications, funding applications, reports and other representations of their research. Lists of authors should include all those **and only those** who meet applicable authorship criteria."
(Singapore Statement 2010)

The International Committee of Medical recommends four criteria for authorship:

1) substantial contributions to the conception of the work or acquisition, analysis and interpretation of data **AND**
2) drafting the work or revising it critically **AND**
3) final approval of the published version **AND**
4) agreement to be accountable for all aspects of the work.
   (ICMJE 2020)

Authorship Abuse

Authorship Abuse includes:

- **Ghost Authorship:** failing to acknowledge someone who has made a "substantive contribution" as defined above.
- **Gift Authorship**: crediting someone who has not made a "substantive contribution". Discussing a paper or making editorial suggestions does not make you an author. Acknowledgements should be used to recognize this kind of contributions Gift authorship is increasingly recognized as "dishonest and fraudulent" (Committee on Publication Ethics 2020)
- **Brokered Authorship**: quid pro quo authorship – I'll make you an author on my group's papers if you make me an author on yours. (Engle 2020)

Policy Environment
Guidelines on what constitutes authorship and appropriate accreditation are accepted as a key part of good research practice. Further information and guidance on good practice can be found in the UK Research Integrity Office (UKRIO) Code of Practice for Research.

Authorship Principles and Guidelines
Those involved in authoring research publications are expected to adhere to the principles and guidelines above. Authorship should be discussed at an early stage and throughout the project, to agree those to be listed as authors and those whose work will be acknowledged. The discussion should include consideration of the ordering of author names (practice varies between disciplines). Every author should be able to explain the author sequence.

No researcher meeting the agreed authorship definition should be excluded. No researcher not meeting the agreed authorship definition should be included.

The following, by themselves, do not justify authorship:

- securing research funding;
- providing space;
- collecting research data;
- discussing drafts or making editorial suggestions
- managing or supervising researchers involved in a project

The work of those who do not meet the authorship criteria but have contributed or collaborated on the research should be properly recognised in the publication in an "Acknowledgements" section. Specifically, where the research has been supported by any funding (e.g. UKRI, industrial partner) this must be stated. Contributions could include technical help, data collection, data analysis, funders, communities, sponsors and advisers. The nature of the contribution (e.g. scientific adviser, collected data) should be specified.

Responsibilities
The Lead Author is responsible for ensuring that authorship issues are discussed and communicated, and that any changes are notified in a timely manner. Written records of authorship decisions, including written declarations from all authors, should be kept. Where there are co-authors, one individual should be nominated to take this responsibility. The Lead (or designated) author should seek verification from each of the authors that they:

- have reviewed the content of the publication;
- can confirm that their area of expertise is accurate to best of their knowledge;
- agree with, and understand, the author ordering;
- take responsibility for their own contribution.

In the case of an authorship dispute, the lead author should attempt to resolve this informally in the first instance (see below)

Dispute Resolution
Where there are disputes over authorship, it is the responsibility of the institution(s) involved to resolve.

The Lead Author will initially seek resolution informally liaising with the parties involved. In the event that the issue cannot be resolved informally (or if the issue involves the Lead Author) the Pro Vice-Chancellor (Research and Innovation) will arbitrate.

References and Links

Engle 2020 https://onlinelibrary.wiley.com/doi/abs/10.1111/jwas.12690?af=R
Committee on Publications Ethics https://publicationethics.org/
ICMJE 2020 http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html
Singapore Statement 2010 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3954607/

Research Impact, Ethics and Ethical Approval Guidance

All research activity conducted by staff, researchers and students within the University must be subject to appropriate ethical scrutiny and review, proportionate to the potential ethical 'risks' of the research. Impact is increasingly expected to be part of the research life cycle of a project. Research impact is the effect research has beyond academia. Research impact can be described as research which contributes to, benefits and influences society, culture, our environment and the economy. Impact is wide ranging and varied. Some of the key areas of research impact include:

- Cultural impact
- Economic impact
- Environmental impact
- Social impact
- Impact on health and wellbeing
- Policy influence and change
- Legal impact
- Technological developments

Impact activities that involve data collection with research participants and/or are likely to be published beyond the REF submission, (e.g. publications, conferences, websites etc.) need to be include in a projects ethical approval. Researchers should be particularly mindful of their impact evidence collection generating findings they may want to publish and should undergo an ethical review and any ethical risks identified (and any health and safety issues) should be suitably managed and mitigated via the approval process.

Where possible impact activities should be designed into the research from the initial project design and therefore be captured in the research project's initial ethical approval application. This may not always be possible and depending on the type of activity undertaken it may be necessary to complete an amendment to the research projects original application.