



UK Research Integrity Office

**Code of Practice for Research:
*Promoting good practice and preventing
misconduct***

Public Consultation Document

Consultation period ends 31st May 2009



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The UK Research Integrity Office would welcome your views on its draft Code of Practice for Research. Particularly:

1. Recognising that codes of practice can only form a part, though an important one, of efforts to promote good practice in research, do you think that the Code has the potential to help:
 - a. Organisations and researchers to understand better the principles and standards of good practice in research?
 - b. Organisations to understand better their responsibilities in promoting and supporting a culture of good practice in research?
 - c. Researchers to consider the wider consequences of their work and to engage critically with good practice in research, rather than treating codes of practice such as this as just another procedure to be followed?
2. Do you consider that there are any omissions in the Code?
3. Would your organisation(s) consider using the Code when drafting or revising your own, more detailed, codes of practice? Please list the reason(s) for your decision, including whether they are specific to your organisation or of more general principle.
4. How does the Code compare to any existing mechanisms for promoting good practice in research at your organisation? Are there elements of the Code that are better or worse than your current system(s)?
5. Would you want other organisations to use the Code?
6. Regarding the Recommended Checklist for Researchers (section 3.0, page 3):
 - a. Should this checklist include a requirement for signing off and verification that its contents have been understood and complied with by the researcher?
 - b. Would a similar checklist for organisations be useful? If so, should this be a checklist for staff responsible for the governance of a research project or a checklist for organisational systems and policies to ensure good practice in research? Or both?
7. Any other views that you have on the Code, its principles, its standards, or any of its other components would also be most welcome.

How to respond to the consultation:

Please send your response **by 31st May 2009** to Eleanor Partridge, UKRIO, Woburn House, Tavistock Square, London WC1H 9HQ or email **EleanorP@UniversitiesUK.ac.uk** .



Code of Practice for Research:

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1.0 Introduction

- 1.1 The UK Research Integrity Office's Code of Practice for Research has been designed to encourage good conduct in research and help prevent misconduct. It provides general principles and standards for good practice in research, applicable to both individual researchers and to organisations that carry out, fund, host or are otherwise involved in research.
- 1.2 The Code is applicable to all subject areas and does not attempt to micro-manage research. Recognising that many forms of guidance already exist, the intention is that research organisations may use the principles and standards outlined in this Code as benchmarks when drafting or revising their own, more detailed, codes of practice.
- 1.3 The Code complements existing and forthcoming guidance on research conduct, such as that provided by Research Councils UK, the Wellcome Trust or the Council for Science and Technology. Use of the benchmarks contained in this Code can assist research organisations in fulfilling the requirements of regulatory, funding and other relevant bodies.
- 1.4 Section 2.0 contains broad Principles which define the responsibilities and values in the conduct of research by both researchers and research organisations.
- 1.5 A one-page Recommended Checklist for Researchers can be found in section 3.0. The Checklist is intended to be a non-technical checklist summarising the key points of good practice in research and is applicable to all subject areas. The Checklist is based on the more detailed standards given in section 4.0 .
- 1.6 Section 4.0 lists Standards for good practice in research that researchers and research organisations should comply with. The standards apply to all disciplines of research but organisations may wish to expand upon them by offering more detailed guidance for certain subject areas or types of research.
- 1.7 It should be noted that the Code draws upon existing good practice in research, which will be acknowledged in an Appendix in the final version.
- 1.8 Note that, for the purposes of this Code, "organisations" refers to any bodies which: conduct, host, sponsor or fund research; employ, support or host researchers; teach research students; or allow research to be carried out under their auspices. Similarly, "researchers" refers to any person who conducts research, including but not limited to, as an employee, an independent contractor or consultant, a research student, a visiting or emeritus member of staff, or a member of staff on a joint clinical or honorary contract.

2.0 Principles

- 2.0.1 Organisations and researchers should adhere to the following Principles, which set out the responsibilities and values relevant to research. While some elements may seem self-evident, and there is some overlap, these principles aim to encourage all involved in research to consider the wider consequences of their work and to engage critically with good practice in research, rather than treating codes of practice such as this as just another procedure to be followed.
- 2.0.2 Organisations and researchers should be guided by these Principles when implementing and complying with the core Standards described in section 4.0 and the Recommended Checklist for Researchers in section 3.0
- 2.1 **Honesty: researchers** should be honest in relation to their own research and that of others. They should do their utmost to ensure the accuracy of data and results, acknowledge the contributions of others, and neither engage in misconduct nor conceal it. **Organisations** should work to create and maintain a culture of research that encourages and supports honesty.
- 2.2 **Integrity: organisations and researchers** should comply with all legal and ethical requirements relevant to their field of study. They should declare any potential or actual conflicts of interest relating to research and where necessary take steps to resolve them.
- 2.3 **Co-operation: organisations and researchers** should promote the open exchange of ideas, research methods, data and results and their discussion, scrutiny and debate, subject to any considerations of confidentiality.
- 2.4 **Accountability: organisations and researchers** should recognise that in and through their work they are ultimately accountable to the general public and should act accordingly. They should ensure that any research undertaken complies with any agreements, terms and conditions relating to the project, and allows for proper governance and transparency. **Researchers** must follow the requirements and guidance of any professional bodies of which they are members.
- 2.5 **Training and skills: organisations** should provide training and opportunities for development for their researchers, and the necessary resources to enable them to conduct research to the required standards. **Researchers** should ensure that they have the necessary skills, training and resources to carry out research, in the proposed research team or through collaboration with specialists in relevant fields, and report and resolve any unmet needs identified.
- 2.6 **Safety: organisations and researchers** should do their utmost to ensure the safety of all involved in research, whether researchers, research subjects, patients, participants or others.

3.0 Recommended checklist for researchers

3.0.1 The Checklist lists the key points of good practice in research for a research project and is applicable to all subject areas. More detailed guidance can be found in section 4.0.

Before conducting your research:	<input checked="" type="checkbox"/>
1. Is your research question appropriate and designed to add to whatever is already known about the subject in question or the methods for researching that subject?	<input type="checkbox"/>
2. Is your research design appropriate for the question(s) being asked?	<input type="checkbox"/>
3. Will you have access to all necessary skills and resources to conduct the research?	<input type="checkbox"/>
4. Will your research comply with all legal and ethical requirements and other applicable guidelines, including those from other organisations and/or countries if relevant?	<input type="checkbox"/>
5. Will your research comply with all requirements of legislation and good practice relating to health and safety?	<input type="checkbox"/>
6. Has your research undergone ethical review, especially if it involves animals, or human participants, material or personal data?	<input type="checkbox"/>
7. Have you made provision for all necessary monitoring and audit?	<input type="checkbox"/>
8. Are you in compliance with any contracts and financial guidelines relating to the project?	<input type="checkbox"/>
9. Have you reached an agreement relating to intellectual property, publication and authorship?	<input type="checkbox"/>
10. Have you reached an agreement relating to collaborative working, if applicable?	<input type="checkbox"/>
11. Have you agreed the roles of researchers and responsibilities for management and supervision?	<input type="checkbox"/>
12. Have all conflicts of interest relating to your research been identified and resolved?	<input type="checkbox"/>
13. Are you aware of the guidance from all applicable organisations on misconduct in research?	<input type="checkbox"/>
When conducting your research:	<input checked="" type="checkbox"/>
1. Are you following the agreed research design for the project?	<input type="checkbox"/>
2. Have any changes to the agreed research design been reviewed and approved?	<input type="checkbox"/>
3. Are you following best practice for the collection, storage and management of data?	<input type="checkbox"/>
4. Are agreed roles and responsibilities for management and supervision being fulfilled?	<input type="checkbox"/>
5. Is your research undergoing all necessary monitoring and audit?	<input type="checkbox"/>
When finishing your research:	<input checked="" type="checkbox"/>
1. Will your research and its findings be reported accurately, honestly and promptly?	<input type="checkbox"/>
2. Will all contributions to the research be acknowledged?	<input type="checkbox"/>
3. Are agreements relating to intellectual property, publication and authorship being complied with?	<input type="checkbox"/>
4. Will research data be retained in a secure and auditable form and for the required duration?	<input type="checkbox"/>
5. Will your research comply with all legal, ethical and contractual requirements?	<input type="checkbox"/>

4.0 Standards for organisations and researchers

4.0.1 Organisations and researchers should comply with the following core Standards, which should be interpreted in light of the Principles in section 2.0, above. Each standard adopts the order:

- a) organisations and researchers;
- b) organisations; and
- c) researchers.

4.1 General guidance on good practice in research

4.1.1 **Organisations and researchers** must comply with all legal and ethical requirements and other guidelines that apply to their research. This includes submitting research proposals for ethical review where appropriate and abiding by the outcome of that review. They should also ensure that research projects are approved by all applicable bodies, ethical, regulatory or otherwise.

4.1.2 Collaboration with researchers and/or organisations in other countries does not absolve organisations or researchers based in the UK from complying with the legal and ethical requirements existing in the UK.

4.1.3 **Organisations** should:

- a) establish clear policies and procedures that cover the Principles of good practice in research (see section 2.0) and offer detailed guidance on the Standards set out in this Code;
- b) make sure that their researchers are aware of these policies and procedures and that all research carried out under the auspices of the organisation complies with them;
- c) provide training, resources and support to their researchers to ensure that staff are aware of these policies and procedures and are able to comply with them;
- d) encourage staff to consider good practice in research as a routine part of their work; and
- e) monitor these measures for suitability and effectiveness and review them where necessary.

4.1.4 **Researchers** should:

- a) be aware of their organisation's policies and procedures on good practice in research;
- b) make sure that their research complies with these policies and procedures, and seek guidance from their organisation when necessary;
- c) work with their organisation to ensure that they have the necessary training, resources and support to carry out their research; and
- d) suggest to their organisation how guidance on good practice in research might be developed or revised.

4.2 Leadership and supervision

- 4.2.1 **Organisations and researchers** should promote and maintain an environment which allows for research of high ethical standards, mutual co-operation, professionalism and the open and honest exchange of ideas. They should foster a culture where good conduct in research is promoted and inappropriate conduct is identified and addressed.
- 4.2.2 **Organisations** should provide direction and supervision of research and researchers, setting out clear lines of accountability for the organisation and management of research. They should encourage the career development of their researchers, and provide training and mentoring of new researchers. They should also offer training and support to those charged with the supervision and development of other researchers.
- 4.2.3 **Researchers** involved in the supervision and development of other researchers should ensure that they have the necessary training, time and resources to carry out that role, and request support if required.

4.3 Training and mentoring

- 4.3.1 **Organisations** should provide training for researchers to enable them to carry out their duties and develop their knowledge and skills throughout their career. They should provide qualified mentors to assist in the training and career development of new researchers. Organisations should also provide career development and refresher training for researchers who are more established in their careers.
- 4.3.2 **Researchers** should undergo training in order to carry out their duties and to develop their knowledge and skills throughout their career, repeating training where necessary to ensure that skills are kept up-to-date. They should identify needs for training when they arise and report them to their manager or other appropriate person as identified by their organisation. See also section 4.2.3 .

4.4 Research design

- 4.4.1 When designing research projects, **organisations and researchers** should ensure that:
- a) the question(s) being asked by the proposed research is (are) appropriate and designed to add to whatever is already known about the subject in question or the methods for researching that subject;
 - b) the design of the study is appropriate for the question(s) being asked and addresses the most important potential sources of bias;
 - c) all necessary skills and experience will be available to carry out the proposed research, in the proposed research team or through collaboration with specialists in relevant fields;
 - d) sufficient resources will be available to carry out the proposed research and that these resources meet all relevant standards; and
 - e) any issues relating to the above are resolved as far as possible prior to the start of the research.
- 4.4.2 **Organisations and researchers** should ensure that any alterations to previously-approved designs of research projects are subject to review to determine that they will not compromise the integrity of the research.

4.5 Collaborative working

- 4.5.1 **Organisations and researchers** should pay particular attention to projects which include participants from different countries or where work will be carried out in another country due to the additional legal and ethical requirements and other guidelines that may apply. See also sections 4.1.2, 4.7.1 and 4.8.1 .
- 4.5.2 **Organisations** should work with partner organisations to ensure the agreement of and compliance with common standards and procedures for the conduct of collaborative research, including the resolution of any issues or problems that might arise and the investigation of any allegations of misconduct in research if they occur.
- 4.5.3 **Researchers** should be aware of the standards and procedures for the conduct of research followed by any organisations involved in any collaborative research that they are undertaking.
- 4.5.4 Researchers should try to anticipate any issues that might arise as a result of working collaboratively and agree jointly in advance how they might be addressed. In particular, agreement should be sought on the specific roles of the researchers involved in the project and on issues relating to intellectual property, publication, and the attribution of authorship.

4.6 Conflicts of interest

- 4.6.1 **Organisations and researchers:** Conflicts of interest occur when personal or institutional factors might influence professional roles or responsibilities. Potential conflicts of interest often arise from financial considerations but can relate to any personal or institutional factor which is in some way dependant on or affected by the outcome of research. A potential conflict of interest does not inevitably lead to an actual conflict of interest or poor practice in research; what is important is that it is recognised and not concealed.
- 4.6.2 If employers, other interested parties and the relevant ethics committee are satisfied that a conflict of interest does not compromise the validity or integrity of the research, researchers and organisations may proceed with the research though they may be required to adhere to certain limits on their activities to contain and manage any such conflict of interest. Where conflicts of interest are judged to be questionable, then researchers and organisations should not proceed with the research. A record must be kept of all decisions made and any limits applied.
- 4.6.3 **Organisations:** Heads of organisations and other senior staff should be aware of potential or actual conflicts of interest at the institutional level and disclose them when they arise so that they can be addressed.
- 4.6.4 **Researchers** should declare any potential or actual conflicts of interest in relation to their research to their manager or other appropriate person as identified by their organisation and to the ethics committee. Conflicts of interest should be disclosed as soon as researchers become aware of them. Researchers should agree to abide by any direction given by their employer and the ethics committee in relation to a conflict of interest.

4.7 Research involving human participants, material or data

- 4.7.1 **Organisations and researchers** should make sure that any research carried out by its researchers involving human participants, material or data complies with all legal and ethical

requirements and other applicable guidelines. Extra care should be taken when research involves minors or vulnerable adults. Collaboration with researchers and/or organisations in other countries does not absolve researchers based in the UK from complying with the legal and ethical requirements existing in the UK.

- 4.7.2 Organisations and researchers should ensure the confidentiality and security of personal data relating to human participants in research and of human material involved in research projects.
- 4.7.3 Organisations and researchers working with, for, or under the auspices of any of the UK Departments of Health and/or the National Health Service must adhere to all relevant guidelines, for example the Department of Health's *Research Governance Framework for Health and Social Care*.
- 4.7.4 **Organisations** should set up systems to ensure the ethical, regulatory and peer review of research projects involving human participants, material or data. The systems should include mechanisms to ensure that such research projects have been approved by all applicable bodies, ethical, regulatory or otherwise.
- 4.7.5 Organisations should also set up systems to ensure the confidentiality and security of personal data relating to human participants in research and of human material involved in research projects.
- 4.7.6 **Researchers** should submit research projects involving human participants, material or data for ethical review and abide by the outcome of that review. They should also ensure that such research projects have been approved by all applicable bodies, ethical, regulatory or otherwise.

4.8 Research involving animals

- 4.8.1 **Organisations and researchers** should make sure that research involving animals adheres to all legal and ethical requirements and other applicable guidelines. They should consider the opportunities for reduction, replacement and refinement of involving animals in research projects and should refer to the relevant guidance. Collaboration with researchers and/or organisations in other countries does not absolve researchers based in the UK from complying with the legal and ethical requirements existing in the UK.
- 4.8.2 **Organisations** should set up systems to ensure the ethical, regulatory and peer review of research projects involving animals. The systems should include mechanisms to make sure that such research projects have been approved by all applicable bodies, ethical, regulatory or otherwise.
- 4.8.3 **Researchers** should submit research projects involving animals to ethical review and abide by the outcome of that review. They should also ensure that such research projects have been approved by all applicable bodies, ethical, regulatory or otherwise.

4.9 Health and Safety

- 4.9.1 **Organisations and researchers** should ensure that all research carried out on their premises or for which they are responsible fulfils all requirements of health and safety legislation and good practice. They should ensure that all research which involves potentially

hazardous or harmful material or which might cause harm to the environment complies with all legal requirements and other applicable guidelines.

4.9.2 **Organisations** should set up systems to ensure that such research undergoes all forms of appropriate review.

4.9.3 **Researchers** should submit such research for all forms of appropriate review and abide by the outcome of that review.

4.10 Intellectual Property

4.10.1 **Organisations and researchers** should ensure that any contracts or agreements relating to research include provision for ownership and use of intellectual property. Intellectual property includes, but is not limited to: research data and other findings of research; ideas, processes, software, hardware, apparatus and equipment; substances and materials; and literary and artistic works.

4.10.2 Organisations and researchers should not give prior disclosure of research or the findings of research when this might invalidate any commercial property rights that could result. Organisations and researchers should recognise, however, that the presumption should be that any intellectual property discovered or developed using public or charitable funds should be disseminated in order to have a beneficial effect on society at large. That presumption may be rebutted where there is an express restriction placed on any such dissemination. Any delay in publication and dissemination pending protection of intellectual property should be kept to a minimum.

4.10.3 **Organisations** should clearly state when their standard guidance might not apply; for example, a university would normally waive copyright of articles prepared for publication in journals or books.

4.10.4 **Researchers** should try to anticipate and resolve any issues that might arise relating to intellectual property at the earliest opportunity, especially when collaborating with other researchers.

4.11 Finance

4.11.1 **Organisations and researchers** should ensure that the terms and conditions of any grant or contract related to the research are adhered to.

4.11.2 **Organisations** should issue guidelines to appropriate members of staff regarding the purchasing or procurement of materials, equipment or other resources for research and the hiring of staff for research projects. These guidelines should include statements on the ownership of resources and the rights of researchers to use them. Organisations should also set up procedures for the monitoring and audit of finances relating to research projects.

4.11.3 **Researchers** should co-operate with any monitoring and audit of finances relating to research projects and report any concerns or irregularities to the appropriate person(s) as soon as they become aware of them.

4.12 Collection and retention of data

4.12.1 **Organisations and researchers** should comply with all legal, ethical and organisational requirements for the collection, use and storage of data, especially personal data. They

should also maintain confidentiality where undertakings have been made to third parties or to protect intellectual property rights. Organisations and researchers should ensure that research data relating to publications is available for discussion with other researchers, subject to any existing agreements on confidentiality. Research data should be kept intact for any legally specified period and otherwise for at least three years from the end of the project, and in a form that would enable retrieval by a third party, subject to limitations imposed by legislation and general principles of confidentiality. Certain disciplines, such as health and biomedicine, may require research data to be retained for a considerably longer period and any subject-specific requirements must be complied with.

- 4.12.2 **Organisations** should have in place procedures, resources and administrative support to ensure the accurate and efficient collection of data and its storage in a secure and auditable form.
- 4.12.3 **Researchers** should collect data accurately, efficiently and according to the agreed design of the research project, and ensure that it is stored in a secure and auditable form.

4.13 Monitoring and audit

- 4.13.1 **Organisations and researchers** should ensure that research projects include requirements for all necessary monitoring and audit at an early stage in their design.
- 4.13.2 **Organisations** should monitor and audit research projects to ensure that they are being carried out to a sufficient standard and in accordance with legal and ethical requirements and any other guidelines. They should make sure that staff charged with carrying out such monitoring and audits have sufficient training, resources and support to fulfil the requirements of the role.
- 4.13.3 **Researchers** should co-operate with the monitoring and audit of their research projects by applicable bodies, and undertake such when required. If they become aware of a need for monitoring and audit where it is not already scheduled, they should report that need to the appropriate person.

4.14 Peer review

- 4.14.1 **Organisations and researchers** should be aware that peer review is an important part of good practice in the publication and dissemination of research and research findings. They should make sure that research undergoes peer review before it is published or otherwise disseminated in the public domain.
- 4.14.2 **Organisations** should encourage researchers to act as peer reviewers and support those who do so. They should recognise the obligations of peer reviewers to be accurate and honest in their work, and to maintain confidentiality, and should not put pressure, directly or indirectly, on peer reviewers to breach these obligations.
- 4.14.3 **Researchers** who carry out peer review should do so accurately and honestly. They should follow the guidelines for peer review of any journal for which they carry out such work.
- 4.14.4 Researchers should maintain confidentiality and not retain or copy any manuscripts under review. They should not make use of research or research findings from a paper under review without the express permission of the author(s) and should not allow others to do so.

- 4.14.5 If researchers become aware of possible misconduct while carrying out peer review, they should inform the editor of the relevant journal in confidence.

4.15 Publication and authorship

- 4.15.1 **Organisations and researchers** should accept their duty to publish and disseminate research in a manner that reports the research and the findings of the research accurately and without selection that could be misleading.
- 4.15.2 **Organisations** should ensure that sponsors and funders of research respect the duty of researchers to publish their research and the findings of their research and that they do not discourage publication or dissemination.
- 4.15.3 Organisations should provide support to assist researchers in the publication and dissemination of research and the findings of research that involves: confidential or proprietary information; issues relating to patents or intellectual property; contractual or other legal obligations; and/or interest from the media or the general public.
- 4.15.4 **Researchers** should address issues relating to publication and authorship, especially the roles of all collaborators and contributors, at an early stage of the design of the project.
- 4.15.5 Authorship should be restricted to those contributors and collaborators who have made a significant intellectual or practical contribution to the work. No person who fulfils the criteria for authorship should be excluded from the submitted work. Authorship should not be allocated to honorary or 'guest' authors. Researchers should be aware that anyone listed as an author of any work is responsible for ensuring the accuracy of that work and should be able to identify their contribution to it.
- 4.15.6 Researchers should list the work of all contributors who do not meet the criteria for authorship in an acknowledgements section. All funders and sponsors of research should be clearly acknowledged and any competing interests listed.
- 4.15.7 Researchers must clearly acknowledge all sources used in their research and seek permission from any individuals if a significant amount of their work has been used in the publication.
- 4.15.8 Researchers should be aware that any attempt at submission of research to more than one potential publisher (duplicate submission) or any duplicate publication without disclosure is unacceptable.
- 4.15.9 Researchers who are discouraged from publishing and disseminating their research or its findings should discuss this with the appropriate person(s) in their organisation so that the matter can be resolved.

4.16 Misconduct in research

- 4.16.1 **Organisations** should establish a procedure to investigate allegations of misconduct in research (as in section 4.1.3) and ensure that any such allegations are investigated thoroughly and fairly and in a timely manner. They should make sure that staff who investigate allegations of misconduct have the necessary training, resources and support to fulfil the requirements of the role. The UKRIO *Procedure for the Investigation of Misconduct in Research* outlines a standard process for investigating alleged misconduct that is thorough and fair to all parties.

- 4.16.2 Organisations should make it clear to researchers that any misconduct in research is unacceptable and that researchers who are found to have committed misconduct in research will be subject to disciplinary proceedings. They should also make it clear that researchers who are found not to have committed misconduct will be supported.
- 4.16.3 Organisations should support those who raise concerns about the conduct of research in good faith and **not** penalise them.
- 4.16.4 Researchers should know what constitutes misconduct in research and report any suspected misconduct through the relevant procedure of the organisation as soon as they become aware of it. They should co-operate with any investigation of misconduct in research when requested. Researchers should work with their institution to support those who raise concerns in good faith about the conduct of research and those who have been exonerated of suspected misconduct.