

UNIVERSITY COLLEGE FALMOUTH GUIDELINES ON GOOD RESEARCH PRACTICE

The Principles of Good Research Practice

Introduction

1. Honesty, openness, accountability and integrity are vital qualities for any academic researcher no matter what their discipline or level of experience. The University needs to ensure that all research it supports is carried out in a climate where high standards of personal conduct are encouraged and expected. The University expects all staff and postgraduate research students engaged in research to act with the highest standards of integrity irrespective of the source from which their posts or research is funded.

2. This document provides guidelines on the issues involved in the proper conduct of research, and on the standards expected. Whilst detailed aspects of these guidelines are more applicable to some subject areas or groups of people than others, the principles of good research practice are relevant to all subject areas.

3. This document is intended for:

- Academic, research and relevant support staff employed by the University, and other individuals carrying out research at, or on behalf of, the University
- Postgraduate research students and their supervisors
- Any persons with honorary positions conducting research within, or on behalf of, the University

4. The term researchers has been used throughout this document to refer collectively to the above groups of people. The term research has been used throughout this document to refer to all aspects of the research process including outlining or drawing up a hypothesis, preparing applications for funding, protocol design, generating data, data recording and analysis, writing-up and publishing and other forms of disseminating results.

Principles of Good Research Practice

5. It is important that a culture of honesty, integrity, openness and accountability in research be fostered and maintained. The University cannot be prescriptive about approaches taken by individuals to solving particular research problems. However, in the conduct of all research, the University expects the following general principles to be understood and observed by all researchers:

- Maintaining open and honest professional standards;
- Ensuring leadership, organisation and cooperation in research groupings;
- Taking special account of the needs of inexperienced researchers;
- Planning and conducting research in accordance with the requirements of funders and the University and all relevant legal procedures;
- Documenting fully results and any research material used, questioning one's own findings and acknowledging honestly the contribution of others;
- Ensuring data is stored and disposed of in an appropriate and responsible manner
- Ensuring the results of the research are disseminated widely
- Taking appropriate measures to protect intellectual assets
- Following best current professional, clinical and ethical practice.

Management of Good Research Practice Professional Standards

6. Honesty. At the heart of all research, regardless of discipline or institution, is the need for researchers to be honest in respect of their own actions in research and in their responses to the actions of other researchers. This applies to all aspects of the research process.

7. Openness. While recognising the need for researchers to protect their own research interests in the process of planning their research and obtaining their results, the University encourages researchers to be as open as possible in discussing their work with other researchers within and outside the University and with the public. Researchers should contact the relevant support services for advice on releasing results that might affect the potential to protect the research at a later date. Once results have been published, researchers should make available relevant data and materials to others on request for appropriate purposes.

8. Accountability. Researchers, and in particular those named as principal investigators or grantholders, must ensure that the research that they are undertaking is consistent with the terms and conditions covered by agreements between the University and the funder. This includes, but is not restricted to, ensuring that the research programme carried out is as defined in the original proposal to the funder, unless amendments have been agreed in writing; that the finance is used solely for the research purpose that it was intended; that reports are both accurate and produced on time; and that conditions relating to publication and ownership of Intellectual Property are adhered to.

9. Integrity. Researchers must be honest about conflict of interest issues, whether real, potential or perceived, at the earliest opportunity and at all stages of research, e.g. when applying for funding, when identifying collaborators and when reporting results. Plagiarism, deception or the fabrication or falsification of results is regarded as a serious disciplinary offence. All researchers are encouraged to report cases of suspected misconduct or malpractice and to do so in a responsible and appropriate manner in accordance with the University's procedures for dealing with misconduct in research and for disclosing concerns about malpractice.

Leadership and Organisation in Research Groupings

10. Within the University, it is the responsibility of the Rector, Vice-Rector and Deans of School to ensure that a climate is created which allows research to be conducted in accordance with good research practice.

11. Responsibilities of the Deans of School may be delegated to a nominee, such as Associate Deans, research group/cluster leaders or the Chair of a relevant Committee. These delegates should create a research environment of mutual cooperation, in which all members of a research team are encouraged to develop their skills and in which the open exchange of ideas is fostered. They must also ensure that appropriate direction of research and supervision of researchers is provided which in the case of Postgraduate Research Students should comply with University and National codes of practice. Responsibilities in conducting research should be clearly allocated and understood.

The Needs of New Researchers

12. Researchers who are new to the academic community may face particular difficulties. Responsibility for ensuring that new researchers understand good research practice lies with all members of the community, but particularly with Deans of School. Good practice

includes the induction of researchers to their new environment and the relevant School and University procedures.

Training and Supervision of Researchers

13. All researchers should receive good supervision appropriate to their experience. Researchers should not be put under unwarranted pressure to produce results. Supervision should include all relevant stages of the research process. Group Leaders, or Heads of Schools where there are no Group Leaders or equivalents, are responsible for ensuring that all new researchers undertake appropriate training in accordance with their specific requirements. Training in supervisory skills should be provided where appropriate. Particular requirements apply in the case of postgraduate research students.

Planning and Conducting Research

14. In applying for external funding, researchers should take all reasonable measures to ensure accuracy of information and compliance with University procedures.

15. Purchasing and expenditure of funds should be in accordance with the terms and conditions of any grant or contract held for the research and the University's financial regulations.

16. Researchers need to establish whether ethical approval is likely to be needed for a research project in accordance with the University's Research Ethics Policy and associated guidance which are available on the University's intranet.

17. All research including the appointment of researchers must be carried out in a manner that complies with the University's Code of Practice on Equal Opportunities in Employment, the Concordat on Career Management of Contract Research Staff, the Health and Safety at Work Act (1974) and the Safety Regulations approved under this Act, the University's safety policies, the University's safety rules and other University safety management documents.

18. All members of research groupings should be made aware of the:

- Legal and ethical requirements relating to human participants, animals and personal information
- Requirements on confidentiality of data and publication
- Appropriate methods of record keeping, data storage and disposal relevant to the discipline
- The importance of recognising and reporting unforeseen results or incidents
- All other relevant guidance, codes of practice and regulations related to their work

Research Results

The Need for a Critical Approach

19. Researchers should always be prepared to question the outcome of their research. The University expects all research results to be checked before being made public. It is important that research ideas can be challenged and tested once published.

20. It is important that researchers or research groupings should not become subject to other pressures such that the normal processes of research inquiry cannot be enforced, e.g. by constraints imposed by the source of funding of the research. Any pressure to produce results that suit the specific interests of a funder must, of course, be resisted. This is

particularly the case where the individual researcher(s) could be perceived to have a conflict of interest, e.g. where they might have an equity share in the funder, or may hold a position (e.g. Director) or be involved in consultancy with the funder. Any such conflict of interest, whether real, potential or perceived, should be disclosed at the earliest opportunity to the Head of the School (or other equivalent senior officer in non-School units) or to the Vice-Rector if the office holder is involved.

Documenting Results

21. Throughout their work researchers should keep clear and accurate records of the procedures followed, of the sources of research material where archives, collections etc. are researched and of the results obtained, including interim results. This is necessary not only as a means of demonstrating proper research practice, but also in case questions are subsequently asked about the conduct of the research, the results obtained or ownership of the data or results. Proper documenting and storage procedures will minimise cases of allegations of research misconduct where original data 'have disappeared' or allegedly been lost or cannot be replicated.

22. It is the duty of the researcher to comply with the regulations of the Data Protection Act currently in force and to ensure that copyright, a third party's intellectual property rights and confidentiality are not breached. The Data Protection Act applies to research that involves personal data collected about living individuals and requires that such data should not be used for purposes other than those for which it was collected. Advice on compliance with the Data Protection Act should be sought from the University's Data Protection Officer.

23. In cases where transcripts of interviews are the basis for research, these should be kept as confidential according to the procedures in place when the data was collected. In clinical studies, consent forms should be kept securely with the raw data and normally for the same period of time. In social sciences and humanities research, any sources (e.g. other published works, archives, collections) should be accurately recorded and any transcription or data archive rules recorded at the start of the project to ensure consistency. The keeping and maintenance of laboratory notebooks, and other data sources, can also help to ensure that intellectual property can be protected.

Storage and Disposal of Data

24. Primary data which is the basis for publications should be securely stored for an appropriate time in a durable form. The means of data storage (paper, diskette, CD-ROM, etc) should be appropriate to the task. Provision should be made for the automatic back-up of data or software stored on a computer and special attention should be paid to guaranteeing the security of electronic data, use of computer hard drives and networks may not necessarily provide the security of data required.

25. The appropriate period for retaining data depends on circumstances (e.g. in some fields, the importance and relevance of data can be superseded very rapidly). Equally, where the research is externally funded, the time for keeping data may be specified by the funder. The appropriate timescales and mode of data storage and the process for review in the light of changing technology should be confirmed in writing at the outset of the research programme.

26. Disposal of data and samples should be carried out in accordance with the appropriate internal or external procedures according to the nature of the research data and any ethics review requirements.

Publishing Results

27. The issue of authorship is important in the context of good research practice, and the University expects the matter to be taken seriously. The University expects anyone listed as an author on a paper to accept personal responsibility for ensuring that they are familiar with the contents of the paper.

28. In order to ensure a high standard of publication, researchers should seek an appropriate form of peer review prior to publication.

29. If an error is found that diminishes the worth of the published results, the researcher should discuss the matter with the lead researcher and notify any co-authors. A correction should be published as soon as possible setting out the basis of the reservation. Where the findings are found to be in serious doubt, a retraction should be published speedily.

30. The standard position of the University is that research should be published when appropriate and wherever possible. This is a necessary adjunct to making research available to the public and is frequently a condition imposed by funders. Delays in publication should be avoided except, for example, in relation to proprietary information of the University or the funder incorporated in the research results or where journals require amendments or modifications. Where the University and/or the funder wish to secure patent protection for inventions made in the course of the research, short delays in publishing are acceptable to allow patents to be filed, but these delays should be limited to a maximum of 90 days wherever possible. Access to a thesis may be restricted for up to three years in accordance with the Consultation and Borrowing of Theses set out in the University calendar.

Acknowledging the Role of Collaborators and Other Participants

31. Any person who participates in a substantial way in conceiving, executing or interpreting a significant part of the relevant research should be given the opportunity to be included as an author of a publication derived from that research. The practice of honorary authorship is unacceptable, i.e. only those who have participated in the research should be listed. The contributions of formal collaborators and all others who directly assist or indirectly support the research should also be properly acknowledged. This applies to any circumstances in which statements about the research are made, including provision of information about the nature and process of the research, and in publishing the outcome. Where appropriate, the funders of the research should be acknowledged.

Exploitation and Protection of Intellectual Assets

32. The University recognises there are instances where the potential for exploiting intellectual property (IP) generated by research is important both to improve economic competitiveness and to generate revenue. The potential to exploit IP should be considered at the application and contract stages and certainly before data are submitted for publication or presented in any other public forum including the internet.

33. The ownership, protection and exploitation of IP is governed by the University's Policy on Intellectual Property and Commercialisation.

Professional and Ethical Practice

34. The standards of academic practice set out in guidelines published by academic societies and other relevant professional bodies should be observed by researchers.

35. Research must only be carried out when all the necessary approvals, notifications and licences required by University policies, legislation and through national and local regulatory bodies, are in place. Dean of School should ensure that the appropriate approvals are identified, obtained and documented prior to the start of the research.

36. These are the minimum standards expected of researchers and do not override or replace any professional codes or practices, or those codes or practices governing the terms of any external funding received by researchers to carry out their research work, which must be followed in addition to these guidelines.

Misconduct

37. These guidelines set out the framework for the highest standards of personal conduct in research which apply to all staff. These are the minimum standards expected, together with any additional professional or funding body requirements. The following behaviour is unacceptable to the University: fabrication, falsification, plagiarism, misrepresentation, mismanagement or inadequate preservation of data, breach of duty of care.

The University has a written procedure for dealing with allegations of research misconduct which can be found on the University's intranet. Any member of the University who believes that an act of research misconduct has occurred or is occurring should notify the Dean of School (or other equivalent senior office in non-School units) or his/her deputy if the office holder is involved in the allegation in the first instance.

Other References and acknowledgements

Internal Documents:

- UCF's Research Ethics Policy
- UCF's Policy on Intellectual Property
- Calendar
- Procedures for Dealing with Allegations of Misconduct in Research
- Code of Practice on Equal Opportunities in Employment
- Financial Regulations
- Public Interest Disclosure: A Procedure for Staff to Raise Concerns About Malpractice

External information used in formulating these guidelines:

- RCUK Policy and Code of Conduct on the Governance of Good Research Conduct
- UKRIO Code of Practice for Research
- Research Governance Framework for Health and Social Care, Department of Health
- Good Clinical Practice Guidelines, International Conference on Harmonisation
- Office of Research Integrity
- Nolan Committee on Standards in Public Life
- Arts and Humanities Data Services, Guides for Good Practice
- Central Office of Research Ethics Committee (COREC)
- Guidelines on Good Research Practice, University of East Anglia
- Code of Good Practice in Research, University of Edinburgh
- Code of Good Practice in Research, University of Glasgow

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