GOOD SCIENTIFIC PRACTICE
Guidelines on Research Ethics
at the University of Lapland
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Approved by the Research Council on 28 January 2009
Introduction

The Research Council at the University of Lapland serves as the University’s Advisory Board on Research Ethics. The Advisory Board ensures compliance with research ethics, good scientific practice and the quality of research at the University. In its capacity as the Advisory Board on Research Ethics, the Research Council conducts pre-assessments on research ethics when requested and provides guidelines on research ethics for the whole University.

This ‘ethics manual’ was commissioned by the Research Council at the turn of 2008-2009. The purpose of the manual is to develop a working culture as part of quality at the University of Lapland. The recommendations and guidelines set out in the manual reinforce awareness of research ethics at the University and define the common rules to resolve ethical problems.

The manual sets out the ethical principles to which the University of Lapland adheres, their internalisation into daily activities at the University and the procedure for handling violations of ethical principles. The manual is based on the guidelines on good scientific practice and the procedure for handling violations issued by the National Advisory Board on Research Ethics (http://www.tenk.fi/julkaisutjaOhejeet/htkfi.pdf). The University of Lapland is committed to adhering to these guidelines, as are other universities in Finland. The manual also incorporates good practices at other Finnish universities, literature about research ethics and the experiences of professors at the University of Lapland in seeing different research projects and funding through to completion. The guidelines were written by a working group comprising Professors Suvi Ronkainen, Merja Laitinen and Soile Veijola. The text adheres to an original paper prepared by Professor Anu Valtonen, Senior Scientist Anna-Liisa Ylisirniö and Quality Manager Helka Urponen. The Research Council at the University of Lapland approved the guidelines on research ethics on 28 January 2009.

1. The importance of research ethics

Research ethics play a key role in modern science, both in the skill of researchers as well as in daily activity and the focus of research. However, research ethics and good scientific practice in the university world have long been an unspoken communally shared practice. The experiences of the Second World War initially led to drawing up international regulations for medical research (Nuremberg Code 1947). The expansion, professionalisation and internationalisation of research and researcher training brought with them the need to set out recommendations for good scientific practice for other disciplines. In 1991, the Finnish Ministry of Education appointed the National Advisory Board on Research Ethics (TENK) to propose initiatives to further research ethics. It has drawn up guidelines on good scientific practice and the procedure for handling violations (http://www.tenk.fi/julkaisutjaOhejeet/htkfi.pdf). All universities in Finland and some universities of applied sciences and research institutes are committed to adhering to the guidelines.

However, from the perspective of teaching practices the changing scientific and operating environment constantly bring with them new ethical challenges and issues that warrant open dialogue and deliberation on research and teaching practices at universities. For instance, new funding sources (ESF applications and financial support available from companies), cooperation with non-scientific organisations and the parallelism between scientific research and development often lead to situations where it becomes necessary to engage in discussion concerning the scope of application of research ethics and good scientific practice.
The concept of research ethics embodies principles associated with the legitimacy and implementation of research as well as general guidelines for good scientific practice. Broadly understood, teaching (planning, content, methods of delivery and interaction), guidance and research are all activities where the principles of good scientific practice are applied in practice. In other words, research ethics within ordinary activities are not a supplement or separate dimension; they are an integral aspect of everyday university life. Therefore, the premise for the guidelines is that monitoring and complying with good scientific practice are an essential aspect of quality at the University. The University should apply the principles of good scientific practice in all its activities.

2. Research ethics part of the scientific community’s activities

With the exception of medical research, which is governed by its own legislation, and register research, which is regulated by the Act on the Openness of Government Activities and the Personal Data Act, research ethics do not provide clear rules on how to act in every situation. However, it does provide the principles that set out the framework for assessing one’s own actions as a researcher and the actions of others. These principles embody

- the obligation to conduct good, meticulous and professional research,
- the assessment of the safety of research subjects, which affects the selection of the research method, the handling and publication of materials and the overall research process,
- the researcher’s right to his or her own ideas, materials and issues associated with publication,
- collegiality, respect for the work of other researchers and the giving of recognition, and
- social relevance and the public nature of information.

Good scientific practice and quality research are integrated. Poorly conducted, inaccurate or overgeneralised research and careless claims are contrary to good scientific practice. The scientific community plays its own role in appraising research results. Since scientific knowledge is based on the previously known, from the perspective of the entire scientific community it is of crucial importance that the public nature of research and the associated culture of commenting and dialogue is not threatened by plagiarism, the misappropriation of research ideas or ignoring earlier research. As the reliability of scientific research is based on good scientific practice, it is not merely up to the individual; it is the responsibility of the research community at large. Consequently, the University of Lapland

- ensures that undergraduates and researchers have sufficient information on good scientific practice (integrated into all method teaching and seminar work),
- ensures that seminar practices (including commenting and referencing) and guidance are ethical (see, e.g. the rules at the University of Lapland for seminars on collecting and handling materials: [http://www.ulapland.fi/?Deptid=25559](http://www.ulapland.fi/?Deptid=25559)),
- takes research ethics into consideration when assessing theses,
- arranges a mandatory course on research ethics, the Personal Data Act and good scientific practice for all postgraduates (part of regular teaching at the University’s graduate school),
- conducts pre-assessments on research ethics, and
- observes agreed practices in situations where there is cause to suspect violation of good scientific practice.

Research ethics and good scientific practice apply equally to undergraduates, teachers, postgraduates and professional researchers. Consequently, the guidelines are generalised. Problematic situations for undergraduates and postgraduates and the level of competence expected
from them differ from each other, so there is justification for setting out the working methods for each group.

3. Ethics at different stages of the research process and for participants in research

Ethics are involved at every stage of the research process. In addition to compliance with technical reference guidelines, ethical research calls for the skill to constantly make decisions as well as deliberation on ethical issues concerning relationships at different levels (phenomenon, informants, researcher, scientific community and society). Producing good and causing harm are relative concepts. In research, they take the shape of interaction between the researcher, the phenomenon being researched, the people participating in the research and surrounding reality. The researcher is bound by three fundamental ethical obligations: the obligation to produce reliable knowledge, to maintain the public nature of research and to respect the rights of research subjects.

The principles of research ethics state that research should be just and useful; it should produce good. Research may not cause harm to the research subject, the understanding of the phenomenon within a professional context or to the scientific community. Producing harm or good is fundamentally a question of power, which is evident in the researcher’s power of definition and decision-making at the different stages of research.

Planning and choice of theme

Although the University and Faculties’ research strategies provide guidance on the choice of research themes and the chosen areas of priority are shown to be ethically important foci of research, they do not eliminate the principle of academic freedom, i.e. a researcher’s right to choose a theme and to determine his or her focus of research independently. Even then, the choices should be based on social and scientific relevance. Choosing a theme and formulating questions require legitimacy and a precise analysis of research motives (cp., e.g., the desire to engage in voyeurism or the search for fame).

Alongside the researcher, the supervising professor and faculty are responsible for the choice of the dissertation research theme and the formulation of research questions. The research plan and the decision to accept the person as a postgraduate student must include an ethical assessment. The ethical assessment includes an evaluation of whether the postgraduate student is capable of carrying out the said research and whether the formulation of questions, commitment to the point of departure and implementation plan are ethically sustainable.

When choosing the theme and formulating questions, respect for the phenomenon and previous research on the theme demonstrate an ethical way of working, which calls for gaining a thorough and extensive grounding of the phenomenon and relevant research.

Implementation

Depending on the theme and the research, the researcher should first find out about research permits and submit an application to the appropriate parties if necessary. The supervisor must approve research permit applications for research for a thesis.
Conducting ethical research respects the phenomenon and the formulation of the question; therefore, the choices involved in collecting and analysing the materials must be legitimate. At every stage of the research process, the researcher must act according to the rules of ethics flexibly, sincerely, openly and honestly and with respect for the research subjects.

The methods of collecting materials should be chosen in relation to the formulation of the question and the target group. The researcher has to identify the specific challenges set by target groups, such as cultural minorities. The standard of the methods of collecting materials should be in proportion to the question and the objective and purpose of the research. Analysing and reporting on all the collected materials is an ethically sustainable way of working.

The freely given consent of the participants, the determination of one’s personal commitment and the possibility to withdraw from the research at any stage whatsoever are part of respect for human rights and thereby ethical scientific research. The research subjects must be able to participate in the research freely and without conditions. The researcher must give the necessary information about the research so that the subjects can decide whether to participate. The consent of selected or registered people can only be requested after they have received sufficient information. Signed permission from those participating in research is required in those instances where

* other information about the research participants, such as data from registers, is merged with the collected information, and
* the collected material includes sensitive information and it is stored as identifier data for follow-up studies.

The fundamental ethical requirement for conducting research is the protection of informants from suffering, pain and other psychological, physical, social and emotional harm. When researching themes that are generally considered sensitive, the researcher must be conscious of the possibility that the research will cause emotional or psychological reactions among the participants. When planning the research, the researcher must explain what action will be taken in such situations and arrange professional support. The researcher is also responsible for assessing whether the voluntary participants in the research are sufficiently stable to participate in producing research materials. When necessary, the researcher must have the courage to remove an individual from the research. Children and special groups constitute groups that need protection, and their participation requires the permission of a guardian or other legal representative.

The researcher is bound by responsible commitment to the research, for the completion of the research and for the dissemination of the results to the scientific community, professionals, decision-makers and the public. The researcher must also honour all promises to the research subjects, the scientific community and possible funding providers. With respect to postgraduate research, the commitment also applies to appointed supervisors (see the University of Lapland’s recommendations on dissertation supervision practices http://www.ulapland.fi/?Deptid=20073).

**Reporting and storing materials**

The researcher is bound by the obligation to maintain the confidentiality of the research participants and their information. However, the researcher is responsible for notifying the authorities of a planned serious offence that could be prevented (possibility of prevention). Under the Child Welfare Act, this duty also applies if a researcher discovers that a minor is the object of neglect, danger or abandonment or if the child is endangering his or her own health and development. In such cases, the researcher is duty bound to file a child welfare notification. The researcher is also
bound by the obligation not to divulge to a child’s parents or other authorities anything the minor may have said.

The researcher is responsible for guaranteeing anonymity in reporting in order to protect the privacy of participants in the research. The researcher must be able to evaluate which matters should be reported extremely cautiously in order to avoid the risk of identification. Ethically sound reporting also involves honesty towards the researched phenomenon and the analysed materials. The National Advisory Board on Research Ethics lists the following violations in its guidelines on Good Scientific Practice:

* fabrication refers to the presentation of fabricated findings. Fabricated findings have not been obtained in the manner or using the methods described in the research report. Presenting fabricated results in a research report is also fabrication.

* the misrepresentation of findings refers to the intentional alteration or presentation of original findings in a way that distorts the results. Misrepresentation involves altering or selecting results, such as by omitting the presentation of results or data essential to conclusions.

With regard to research permit applications or informed consent, the researcher is committed to the stated purpose (research/teaching/follow-up study), handling and storage of research materials. If research materials were obtained solely for the said research, they are stored carefully under lock and key for a specific period after the completion of the research and destroyed at a later date. If the materials were also obtained for later use, the researcher should ensure they are stored appropriately. The Finnish Social Science Data Archive website provides information on archiving materials (http://www.fsd.uta.fi/aineistot/arkistointi/index.html). The University of Lapland adheres to the Academy of Finland’s requirement for a research plan to include a data management plan for the materials. The plan explains how the research materials will be obtained, how they will be used and stored and how they will be used later. The Academy of Finland recommends that social science materials be deposited in the Finnish Social Science Data Archive.

4. Ethics and guidance

The relationship between the supervisor and the writer of a dissertation is one of trust, where the supervisor represents the scientific competence required by the postgraduate’s research theme as well as the academic institution. The primary objective of supervision is scientifically qualitative and ethically grounded research. During the relationship, the supervisor becomes cognisant of unpublished ideas and papers, but the supervisor also offers ideas and suggestions to the person receiving guidance. The activities of both the supervisor and the person receiving guidance are governed by the rules of research ethics, which refers to respect for one another’s expertise and the confidentiality of ideas, unfinished papers or interpretation proposals and comments. Manuscripts and other unpublished papers may not be given to a third party or quoted without the writer’s permission. However, discussion between supervisors where reference is made to ideas on paper is normal practice. Good scientific practice includes the public expression of gratitude for supervision in a foreword or footnote.

The supervision of dissertations sometimes takes on the characteristics of work guidance – especially if sensitive themes are the foci of research. In this instance, the supervisor – and to some degree the faculty – need to reflect on the extent to which the researcher can receive work guidance.
support as part of the supervision and the extent to which the research theme calls for particular commitment to the research by the supervisor.

However, research supervision is not primarily personal work guidance. Therefore, the writer of the dissertation and the supervisor need to clearly agree on which matters divulged within the relationship are confidential and not to be disclosed to external parties.

A supervisor should always act professionally. Therefore, the procedure for dealing with sexual molestation, harassment and pestering also apply to supervision. Although the dissertation writer is responsible for his or her choices, the supervisor must ensure that the research process is ethical. The supervisor may suggest an ethical pre-assessment of the research plan. When deciding on the right to embark on postgraduate studies, the faculty must focus attention on research ethics.

The University of Lapland has approved recommendations on the practices for supervising a dissertation, which include a detailed description of the rights and obligations of supervisors and those receiving supervision. (http://www.ulapland.fi/?Deptid=20073)

5. The ethics of research funding and projects

Ethical problems with regard to research funding and projects arise from different sources. There is the question of the influence that funding can exert on research and the public nature of research results, which can sometimes present problems due to business secrets, reputation or potential financial gain. Then, a party funding a project may have interests in the immaterial rights to research results and finally, setting up projects often calls for confidential cooperation with different parties.

The first problem is common and applies throughout the University and university system. As part of its strategic decision-making, the University has to take a position on the types of funding it favours. The legitimacy of scientific research comes from striving for the truth, a critical approach and the public nature of knowledge. Therefore, the University as an institution must ensure that these values are achieved in all research.

All theses completed at the University are public. Only in exceptional cases can students or postgraduates apply to the faculty for part or parts of their theses to be classified as secret; in practice, this refers to instances where certain parts of a thesis are not published due to the safety of the researcher or research subject or because of business secrets. However, in the main the research problem – when the research is funded by a company or non-scientific fund provider – should be formulated in such a way that the results can be published. The researcher is responsible for preserving business secrets in the report. The University of Lapland supports the principle of public knowledge and it does not encourage or make any commitment as a partner to funding which conflicts with this principle.

Good scientific practice embodies respect for immaterial rights and authorship. Plagiarism and misappropriation are violations of good scientific practice. Right of ownership and immaterial rights in projects are the property of the person who conceived or created the said text, idea, model or material. Immaterial rights may be transferred by agreement but even then, acknowledging authorship is paramount. The University of Lapland requires its research partners to respect copyrights and good scientific practice, even when the partner is not a research institute.
Research groups and projects sometimes encounter situations where authorship and ownership are unclear. One requirement for good scientific practice is that the position, rights and share of authorship of the research group’s members as well as issues concerning the ownership of research results are defined and recorded in a manner approved by the parties concerned before the research commences or a researcher is recruited for the project. This must be taken into consideration during project planning and when drawing up research agreements.

Projects often involve confidential cooperation with different actors. There should be records of a project’s planning stages and letters of intent that specify the objectives of the project and the work to be performed in order to achieve its objectives. The ideas and papers proposed during project planning are all confidential.

Good scientific practice during project planning calls for carefully drawn up application documents, including a CV and a list of publications, and that the information presented therein is correct.

6. Ethical rules for the research group

Scientific research is typified by research being conducted as part of a research group. These groups are often put together specifically to apply for funding. The advantages of a research group are comments from other researchers, ideas, the opportunity to share responsibility for completing a tough research assignment, the motivating exchange of thoughts and shared brainstorming. However, this way of working is prone to problems, which include commitment to working in the group, the ownership and publication of jointly produced ideas, agreeing on the use of funding, issues concerning materials, financially exploitable inventions etc. The situation is made more complicated by the fact that the group’s members may have different responsibilities and make different contributions: one member may carry out the research whereas another may have conceived the idea and the work upon which the whole project rests.

This being the case, good organisation and agreement beforehand are key to the research group’s activities. As mentioned above, the position, rights and share of authorship of the research group’s members as well as issues concerning the ownership of research results are defined and recorded in a manner approved by the parties concerned before the research gets underway. Group organisation refers to good administrative practice, the division of tasks and responsibilities and impartiality. The director of the research group shoulders a huge responsibility for organising the group and facilitating trust. Similarly, it is the researcher’s duty to give the group his or her time and knowledge in order to achieve the common objectives.

A project frequently involves jointly collected materials, and there should be agreement on their ownership and use. The agreement should take into consideration the extent to which the collection of materials is planned and carried out based on the researcher’s expertise and creativity and constitute part of a particular research design as well as the type of agreement made with the research subjects concerning the use of the materials. The nature of the materials and the way in which they were generated vary from researcher-centred and sustained committed creativity to the technical performance of collating data.

The research group must also agree on the way in which each member’s contribution appears in publications. A general requirement is that publications mention as authors those people who conducted the research or wrote the publication based on the research. One guideline for defining authorship is the so-called Vancouver rules (http://www.icmje.org) that were originally intended for the publication of biomedical research (see also Clakeburn & Mustajoki 2007). The rules state that
the precondition for authorship is the simultaneous implementation of the following three conditions:

* the writer played a significant role in planning the research and in collecting or analysing its data
* the author participated in writing the publication
* the author gives permission for the publication to be sent to the publisher

Different disciplines have differing practices on the way a project director or supervisor’s contribution is acknowledged in publications (so-called honorary writer idea). Generally steering a group, procuring funding for a group or simply collecting data are not sufficient merits and entitlement to authorship. There are also no clear criteria for the point at which commenting on a text becomes authorship. However, it is to the advantage of all parties that they engage in open dialogue and reach agreement; this obligation applies to everyone who contributes to a publication. The culture of scientific publication also includes remembering commenters and advisors in footnotes, forewords or at the end of the publication.


7. Procedure for violations of good scientific practice

The University of Lapland is committed to adhering to the procedure recommended by the National Advisory Board on Research Ethics for dealing with violations of good scientific practice. The procedure explains how to act when suspicion arises as to a researcher’s professional ethics. Thus, they are intended for people who are working on a dissertation or who work as professional researchers. Violations include misconduct and fraud in science. Misconduct refers to gross negligence and irresponsibility in conducting research. Fraud refers to fabrication, misrepresentation, plagiarism and misappropriation.

There are other violations of good scientific practice. The response to violations of immaterial rights must comply with the relevant legislation: the activities of a public employee are governed by the Administrative Procedure Act and breaches of contract by legislation that applies to contracts.

Suspicion of misconduct or fraud is an extremely serious matter in the scientific community so therefore, the legal protection of the suspected and the violated party must be ensured. Any suspicion of violation of good scientific practice should be handled discreetly and sent in writing to the Rector who decides on a preliminary enquiry. However, the legal protection of both parties must be safeguarded and it is essential to act promptly. Follow-up measures are determined depending on whether the actions of the suspect are considered as misconduct or fraud. In the event of suspected fraud, a group appointed by the Rector carries out a proper investigation. The suspect and the violated party are kept informed at every stage of the investigation and a final report is written. If the suspicion proves correct, the Rector decides on the consequences and the extent to which the violations will be disclosed. If the suspicion proves groundless, the documents are surrendered to the suspect with whom agreement is made on the next step. (To view the procedure in detail, please visit http://www.tenk.fi/julkaisutjaOhjeet/htkfi.pdf)

The most common problem regarding research ethics with undergraduates involves suspicion of varying degrees of plagiarism – stealing another student’s research idea or plan and sometimes
fabricating research results. These are all serious acts that splinter the foundation of the scientific community. In practice, intervention is essential whenever there is suspicion of plagiarism, and it is the easiest to prove. Teachers and supervisors should be aware of the possibility of plagiarism when checking essays and completed courses.

Suspected plagiarism calls for intervention. The University of Lapland recommends adherence to the measures issued by the University of Kuopio in 2007. (Instructions for deterring plagiarism and measures to be taken in case of alleged plagiarism www.uku.fi/opiskelu/instructions_for_deterring_plagiarism.pdf).

The Research Council proposes that the faculties also fine-tune their procedures in the event that undergraduate students violate good scientific practice.

Although a student is personally primarily responsible for adhering to good scientific practice, teachers and teaching planners are responsible for ensuring that the principles of good scientific practice and the ways of working to maintain them are taught and that they are adhered to systematically. Teaching, requiring and supervising the practice of using references is one practical approach. The good example set by a teacher is also effective in this area of education.

8. Ensuring good scientific practice and ethical pre-assessment

When requested, the Research Council as the Advisory Board on Research Ethics at the University of Lapland performs pre-assessments on research ethics. A researcher or research supervisor may request an ethics pre-assessment. An ethics pre-assessment applies primarily to postgraduate or project research, but a supervisor can also request an ethics pre-assessment concerning a master’s thesis.

The Research Council and Graduate School at the University of Lapland jointly arrange a course and events on the theme as well as monitor the quality of research activities and expound the recommendations on research ethics whenever necessary. The Council can also appoint smaller groups to perform an ethics pre-assessment or to handle problems that arise. The guidelines for pre-assessments on research ethics will be fine-tuned later when the working group for the National Advisory Board on Research Ethics has completed its proposals.

Procedure for obtaining a pre-assessment on research ethics

The applicant, who may be the researcher, the research project director or supervisor, submits a FREELY-WRITTEN APPLICATION to the Research Council of the University of Lapland requesting it to perform an ethics pre-assessment on his or her research. The application must specify

a) the purpose for which an ethics pre-assessment is being requested

b) research supervision (the name of the supervisor) and funding

c) contact information, etc.

Appendices to the application:
1) A description of the manner in which the research will be conducted and of how ethics will be safeguarded

* the safety and anonymity of the research subjects,

* the manner in which materials will be collected and analysed,

* how the materials will be stored (Personal Data Act, etc.),

* ethical reflections regarding the theme, and

* the need for possible research permits

2) A brief research plan that also outlines the scientific or social benefit expected from the research.

The application is sent to the secretary of the Research Council.

Applications are processed at the next meeting of the Research Council following the date they were received.

The applicant receives a decision from the Research Council. The decision may be favourable or unfavourable. The Council may request further information from the applicant. If the decision is unfavourable, the researcher is given the opportunity to make the corrections requested by the Council and to reapply for a pre-assessment.

The applicant can receive records of the discussion concerning the matter (minutes of the meeting) as an appendix. It is also possible to receive the decision in English.

Wording of the decision: The Research Council has processed the applicant’s request for an ethics pre-assessment at its meeting held on x.x.xxxx. Based on the pre-assessment, the research plan is legitimate and conforms with good scientific practice.
Sources

Ethical guidelines


Finnish Social Science Data Archive http://www.fsd.uta.fi/laki_ja_etiikka/etiikka_lait.html (guidelines in Finnish concerning personal data legislation, storing materials etc.)

University of Helsinki https://alma.helsinki.fi/doclink/51398 (guidelines in Finnish on research ethics and information concerning different types of permit applications, especially for medical and register research)

University of Kuopio www.uku.fi/opiskelu/instructions_for_deterring_plagiarism.pdf (Instructions for Deterring Plagiarism and Measures to be Taken in Case of Alleged Plagiarism (in English))

National Board of Patents and Registration of Finland http://www.prh.fi/en (patents, inventions and other innovations)

Ministry of Education http://www.minedu.fi/OPM/Tekijaenoikeus/?lang=fi (Copyright, including copyright legislation)

Academy of Finland guidelines on research ethics

Vancouver rules http://www.icmje.org/

Literature


