

ETHICAL RECOMMENDATIONS FOR THESIS WRITING AT UNIVERSITIES OF APPLIED SCIENCES



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INTRODUCTION

This document gives recommendations for universities of applied sciences for a thesis process that is ethical and in accordance with responsible conduct of research. The recommendations are based on legislation and on international and national principles, policy lines, and recommendations of research ethics.

Universities of applied sciences are committed to guidelines on "Responsible conduct of research and procedures for handling allegations of misconduct in Finland" put out by TENK - the Finnish Advisory Board on Research Integrity (TENK 2012). These so-called RCR guidelines define what responsible conduct of research is, how allegations of misconduct are to be handled, and universities of applied sciences are obligated to offer training in research ethics to their students, teachers, and other persons used as experts.

The universities of applied sciences are also committed to the Ethical principles of research in the humanities and social and behavioural sciences drafted by TENK and to arrange research according to the recommendations of ethical advance evaluation (TENK 2009).

In addition to the instructions mentioned above, the preparations have involved the utilisation of, recommendations for "Supervision of Doctoral Dissertations and their Review Process in Finland with a Special Emphasis on Research Integrity" (TENK 2016), drafted for universities by Universities Finland UNIFI and TENK, as well as ethical guidelines for the different universities of applied sciences.

The guidelines take the form of checklists for the student and the supervisor as well as explanatory text. In addition to the checklists, proposals have also been put to the university of applied sciences as an institution.

The recommendations were made by a working group that included Jyrki Kettunen (Arcada, TENK member), Anne Kärki (SAMK), Susanna Näreaho (Metropolia) and Seliina Päällysaho (SeAMK). The RDI committee of the Rectors' Conference of Finnish Universities of Applied Sciences (Arene) approved the recommendations at its meeting on 20 September 2017.

The Advisory Board on Research Integrity has acquainted itself with the recommendations and observed at its meeting on 14 December 2017 that Arene's recommendation on the thesis process significantly promotes responsible conduct of research at universities of applied sciences and their theses, and that the principles of research ethics in the recommendation are in line with the policies of TENK.

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GOALS

The goal of the recommendations is to consolidate the thesis process of the universities of applied sciences, to promote responsible conduct of research, to prevent deceit in research, and for its own part, to enhance the quality of theses.

APPLYING THE RECOMMENDATIONS

Each university of applied sciences decides on its own thesis process, but these recommendations serve as a checklist of the kinds of questions of research ethics can apply to theses. Universities of applied sciences can compare their own instructions with these recommendations and on the other hand, to focus and elaborate on the recommendations in their own instructions.

The recommendations deal with the rights, duties, and responsibilities of the thesis process from the point of view of research ethics.

The recommendations are intended primarily for research theses, but they can also be used, as applicable, for theses in the arts, and for theses using development methods, and with certain applications, to all (written) assignments connected with studies.

RECOMMENDATIONS FOR UNIVERSITIES OF APPLIED SCIENCES

Training in research ethics for students and those supervising thesis work

According to the RCR guidelines of TENK: "*Universities and universities of applied sciences should ensure that their students are well versed in the principles of the responsible conduct of research and that the teaching of research integrity is integrated into their graduate and postgraduate programmes.... In order to guarantee the practice of the responsible conduct of research, universities and universities of applied sciences should offer continuing education in research integrity to their teachers, to supervisors of theses, researchers, heads of research programmes and to other experts.*"

The training should include

- principles of responsible conduct of research common to all branches of science
- general ethical principles of research and also those that apply to specific fields of science
- applicable legislation for research, development, and innovation (RDI) activities
- and the significance of the aforementioned principles for conducting research

The supervisor of a thesis must be familiar with:

- Responsible conduct of research
- The responsibilities of a researcher and supervisor in research practice
- The signs of violations of responsible conduct of research
- RCR process in Finland and possible consequences at a university of applied sciences
- The premises of, need for, and advance evaluation procedure of ethical advance evaluation
- The ethical norms and practices of the various fields of science
- Applicable legislation for RDI activities

The writer of a thesis (UAS) must be familiar with:

- Responsible conduct of research in the thesis work process
- Responsibilities of research practice
- The premises of, need for, and advance evaluation procedure of ethical advance evaluation

The writer of a thesis (Master's degree) must be familiar with:

- Responsible conduct of research
- The responsibilities of a researcher and supervisor in research practice
- The signs of violations of responsible conduct of research
- RCR process in Finland and possible consequences at a university of applied sciences
- The premises of, need for, and advance evaluation procedure of ethical advance evaluation
- Applicable legislation for RDI activities
- The ethical norms and practices of the various fields of science

Expert assistance

The universities of applied sciences, on their own or if possible, together, offer expert assistance and instructions for the support of the supervisor of a thesis and the student, and for identifying and resolving ethical questions. Expert help and instructions are needed especially for thesis agreements, for handling personal information, and data protection (incl. materials, results, and the pseudonymisation and anonymisation of results).

Universities of applied sciences also utilise their support persons in research ethics and their data protection officers in promoting the quality of the thesis process.



Thesis agreement

To mitigate the conflict between the wishes of the commissioner and rules of research that are binding on the student, a cooperation agreement is signed before the start of the thesis work, involving the commissioner of the thesis, the university of applied sciences, and the student, in which the key rules linked with the thesis are agreed on, such as:

- the topic and schedule
- supervision
- costs and reimbursement
- background material and the right to use it
- Result materials and its ownership and user rights (incl. possible compensation and invention fees)
- On confidential material vs. the public disclosure of a thesis
- on responsibility and limits to responsibility

Appendix 1 has an example of a thesis agreement.

A student's right to high-quality guidance

Producing a thesis is primarily a learning experience for the student and it should promote the student's expertise, professional development, and skills for the workplace. In accordance with pedagogical principles the key actor in the thesis process is the student. The teacher directing the effort supports and encourages the learning process, and serves as a guarantor of quality. In addition, the commissioner names a mentor (workplace director) who gives the student support, as well as a workplace angle during the collaboration process.

The supervisors (also the workplace director) should have no conflicts of interest as stipulated in the Administrative Procedure Act (434/2004) Section 28 or on the basis of good responsible conduct of research

In order to guarantee quality of the guidance, the university of applied sciences will need to make sure that the supervisor has:

- adequate prerequisites and possibilities to work in support of the learning process and the thesis process
- sufficient knowledge in the field of the thesis / relevant competence
- in research in an area covered by the Medical Research Act, the required professional and scientific competence

Solving problems connected with supervision

Problems related to supervision should be resolved in such a way that in addition to the student and the supervisor, some other party, for instance an administrative person responsible for education, will participate in the handling of the problem.

Handling of personal data and data protection

In the thesis process of universities of applied sciences more attention needs to be paid to the handling of personal information and dealing with data protection of the targets of the research. Skills and knowledge of supervisors and employees dealing with these should be increased particularly on:

- The grounds for handling personal information and their handling (incl. collection, recording, storage, destruction)
- consent of the person being investigated
- the pseudonymisation and anonymisation of materials, results, and publications

Identifying plagiarism

All theses should be checked through the plagiarism identification system before they are sent to checkers for evaluation. If the results of the thesis are published as articles, they also need to be checked in the plagiarism detection system before being sent to the publisher.

In addition to verification of originality, the system should be used as a tool in guiding students in the use of quotations and references in accordance with the responsible conduct of research and copyright legislation.

Processing to suspected RCR violation

Violation of responsible conduct of research means unethical or dishonest activity that is harmful to research. Responsible conduct of research must be exercised in all theses.

If a suspicion of violations of responsible conduct of research should arise concerning a thesis, the student or supervisor must report the matter to the rector of the university of applied sciences. The rector will decide if a preliminary investigation in accordance with the RCR process should be launched in the matter.



Suspected RCR violations for lower degrees at universities of applied sciences will be handled in the processes of the university of applied sciences itself. Suspected RCR violations connected with higher university of applied sciences degrees are investigated in the processes of the university of applied sciences if the thesis has not yet been approved. If a master's thesis has already been approved, or if the suspected RCR violator demands it, the suspected violation will be handled in an RCR process that takes place in accordance with RCR guidelines.

The process for investigating suspected RCR violations, which is part of the self-regulation of the scientific community, does not involve investigation of copyright issues, protection of personal data, labour law, or other legal questions that might be linked with the suspected violation, and which should be handled in a court of law.

ETHICAL NORMS TO BE APPLIED TO A THESIS

A researcher has ethical and moral obligations toward persons who are objects of the research, the research community, the professional field, the funder of the research, and society, among others.

Guidelines and recommendations for responsible conduct of research are self-regulation of the research community within limits set in law. In addition to going against responsible conduct of research, research fraud and disregard for responsible conduct of research can also be violations of the law (TENK 2012). The personnel and students of a university of applied sciences must be familiar with the applicable parts of this set of norms for self-regulation such as:

- Responsible conduct of research and the handling of suspected violations in Finland. The guideline of the Finnish Advisory Board on Research Integrity 2012 (TENK 2012).
- Ethical principles of research in the humanities and social and behavioural sciences and a proposal for arranging ethical advance evaluation (TENK 2009)
- Ethical norms specific to fields of science and professions
- Open science and research operating model.

RCR guideline

Finnish scientific community has agreed on a shared guideline for research ethics on Responsible Conduct of Research and the handling of suspected violations in the - the so-called RCR guideline (TENK 2012). The RCR guideline gives all those taking part in research a model for responsible conduct of research and it is applied in Finland in all fields of science. The aim of the guidelines is to promote responsible conduct of research and to prevent scientific deceit in organisations conducting re-



search, such as universities, universities of applied sciences, and research institutions. They must also follow the guidelines, as applicable, in national and international research collaboration with companies and other parties.

Primary responsibility for observing responsible conduct of research is with the researchers themselves, but also with the supervisors and the management of the educational institution / research unit. When conducting research - including thesis writing - it is important to be honest, careful, open, and to respect the work of other researchers. Research is conducted in a planned manner. Possible sources of funding must be disclosed and good personnel and financial management is practice in the research. Further information; see e.g. RCR guideline (TENK 2012).

Ethical principles of human sciences research

Already 22 universities of applied sciences are committed to the Ethical Principles of research in the humanities and social and behavioural sciences (as of 6/2017). The commitment is based on voluntary compliance and includes the obligation to hold an advance ethical evaluation in accordance with the principles proposed by TENK (TENK 2009).

In addition to the common RCR guidelines, research qualifying as part of human science should be in accordance with the following ethical principles.

- respect for the right to self-determination of the target of research
- avoiding causing harm
- privacy and data protection

Ethical norms specific to fields of science and professions

Some fields have their own ethical norms and bodies, such as the National Advisory Board on Social Welfare and Health Care Ethics (ETENE), the National Committee on Medical Research Ethics (TUKIJA), and the Advisory Board on Biotechnology (BTNK), which can give detailed instructions on professional ethics on questions such as the relationship between a researcher and the target of the research.

Medical research is regulated by the Medical Research Act (488/1999), which separately defines medical research on people, clinical pharmaceutical studies, etc. Requirements in the Research Act have been described in greater detail in the section on the framework set by legislation.



Open science and research / Open RDI activities

The open science and research model is altering the basic model of scientific research, making it more transparent than before. The OECD, Unesco, the European Commission, and numerous scientific organisations have set guidelines for the principles of the openness of information for solving problems that are global, abundant, and calamitous.

Arene has offered recommendations for the application of procedures of open science and research in the RDI activities of universities of applied sciences. Open RDI activities aim at offering, access to the methods, materials, results, and outcomes of projects to all who are interested, within limits set by research ethics and the law. The goal is to improve openness, quality, reliability, and visibility in RDI activities and to promote the societal effectiveness of the projects and the emergence of new innovations.

All universities of applied sciences are committed to the Open Access statement of ARENE, according to which theses produced at universities of applied sciences are recorded in the [Theseus Open Repository](#), which is open to all.

Responsible conduct of art

Responsible Conduct of Art contains the same elements as the Responsible Conduct of Science, including respect for copyrights and the difference between plagiarism and acceptable quotation. For instance, Laiho (2009 and 2014) has described artistic ethics and good artistic practice in his [filosofia.fi -portal](#).

LEGISLATION

Legislation that guides RDI activities that is applicable to the thesis process in particular includes, among other things,

- the General Data Protection Regulation, GDPR, which is to be applied as of 25 May 2018.
- Personal Data Act
- Medical Research Act
- Act on the Status and Rights of Patients
- Act on the Status and Rights of Customers of Social Welfare
- Copyright Act
- Act on the Openness of Government Activities

EU General Data Protection Regulation

The aim of the General Data Protection Regulation is to increase openness and transparency in the handling of personal information and to strengthen the rights of those registered to monitor the handling of their personal data. Compliance with the obligations of the regulation is supported through efficient implementation: the regulation calls for tougher consequences for the handling of personal information in a manner that violates the regulation than the Personal Data Act does. A supervisory authority can, for example, order measures to counter the incorrect handling of personal information, as well as imposing administrative fines.

Personal Data Act

The processing of personal data must always have a basis in Section 8 or Sections 14-20 of the Personal Data Act. Sections 14 - 20 of the Personal Data Act concern the right to handle personal data in historical or scientific research, or for statistics, and genealogy, for example.

Collecting and handling sensitive information is forbidden in most cases. Sensitive information includes personal data that depicts, or is intended to depict:

- race or ethnic origin
- a person's social, political, or religious convictions or membership in a labour union
- a criminal act, punishment, or other sanction related to crime
- a person's state of health, illness, or disability, or treatment that targets the person, or actions that are comparable to these
- a person's sexual orientation or behaviour
- a person's need for social welfare services, or that person's use of social services, support measures, or other social benefits

Personal identity numbers may only be handled in accordance with stipulations of Section 13 of the Personal Data Act. The starting point for such handling is that the recording of the personal identity number is important for clearly unambiguous identification of the registered person. If other information on the individual is sufficient for the purpose, personal identity numbers should not be collected or handled.

Medical Research Act

Regulations on medical research are in the Medical Research Act (488/1999 with amendments) and in a decree issued on its basis (986/1999 with amendments).



In the act medical research is defined as research involving intervention in the integrity of a person, a human embryo or a human foetus for the purpose of increasing knowledge of health, the causes, symptoms, diagnosis, treatment and prevention of diseases or the nature of diseases in general. Before medical research as referred to in the Medical Research Act commences, a favourable opinion from the ethics committee must be procured for the plan.

Among other things, the Medical Research Act calls for

- always prioritising the interest and well-being of the person being studied over the interests of science and society
- preventing risks and harm to the person being studied
- ensuring that the implementation of the measures should always have greater benefits for health or science than the risks and harm imposed on the person being studied.
- obligations and requirements of the supervisor of the study
- the consent of the person being studied: written and knowledge-based
- a person being studied who is of diminished capacity, or under age
- Handling of personal data

Depending on the situation of the research, the Act on the Status and Rights of Patients and the Act on the Status and Rights of Customers of Social Welfare might apply.

Copyright Act

Research material, results, and publications are subject to regulations contained in the Copyright Act. The use of material subject to copyright requires permission of the owner of the copyright, unless otherwise set by regulations on limitations. When materials, methods, or results owned by others are used as background information in a thesis, their origin, authors, and sources must be mentioned in accordance with good research practice and the law.

The rights to use research results under copyright belong to those producing the research unless there is a specific agreement to do otherwise, with a transfer of the rights. In connection with RDI projects, agreements are made among collaborative parties in which they agree on the ownership and use of research materials and results that are protected by the Copyright Act and other intellectual property rights.

Act on the Openness of Government Activities

In all universities of applied sciences theses that have led to getting a degree are official documents under the Act on the Openness of Government Activities, which are public unless otherwise stipulated.



The recommendation of the RDI committee of the Rectors' Conference of Finnish Universities of Applied Sciences Arene on an ethical thesis process compatible with responsible conduct of research

