Ethical guidelines for thesis work

Student's checklist

1. I have ascertained my possible conflicts of interest
2. I have acquainted myself with the topic of my thesis
3. I have, together with my supervisor, ascertained the resources required by my work
4. I have acquainted myself with the guidelines of research ethics
5. I have acquainted myself with the principles linked with the handling of personal information and data protection and the instructions from my university of applied sciences.
6. I have ascertained together with my supervisor if my thesis requires an ethical advance evaluation and/or research permit, and if needed, I have taken care of these
7. I have signed the required agreements together with my supervisor and my collaborative partners
8. The authorship of my thesis and possible other publications connected with my thesis has been agreed upon
9. Storage and usage rights of the materials for my thesis have been agreed upon in a manner accepted by all parties
10. I have reported on the funding and other significant linkages connected with my thesis
11. I am aware that my thesis will be examined in a plagiarism identification system
12. I understand that my thesis is a public document
13. I have a right to a high-quality thesis process
Ethical guidelines for thesis work

Supervisor's checklist

1. I have ascertained my possible conflicts of interest
2. I shall supervise the writing of the thesis in a competent manner
3. There are adequate resources for producing the thesis
4. Guidelines of research ethics shall be followed in the thesis work
5. Legislation on the handling of personal data and data protection shall be followed in the thesis work
6. Before starting on the thesis a favourable statement from the ethics committee and the appropriate permissions for research have been procured, if necessary
7. Necessary agreements have been signed together with the student, a representative of the university of applied sciences, and possible collaborative partners.
8. If necessary, an agreement has been signed with the student about the authorship of publications connected with the thesis
9. Agreements have been made on the storage and usage rights of all materials in a manner acceptable to all parties
10. Funding and other significant linkages connected with the thesis have been declared
11. The thesis shall be examined in a plagiarism identification system and the student is aware of this
12. The thesis is a public document and the student and the collaborate partner are aware of this
13. The student has a right to a high-quality thesis process
1. Do I have a conflict of interest?

A conflict of interest means that a person has a relationship with the matter being processed, people who are a party to it, or with persons who are within the sphere of influence in a solution to be reached on the matter, which might jeopardise the person's neutrality. For a conflict of interest to exist it is sufficient that neutrality may have been objectively compromised.

The regulations on conflicts of interest in the Administrative Procedure Act (Universities of Applied Sciences Act, section 21, article 1) are applied in all activities of a university of applied sciences. The regulations on conflicts of interest apply both to members of administrative bodies and the activities of individual employees in all decision-making and preparatory activities, and when functioning as an expert.

The Responsible conduct of research and procedures for handling allegations of misconduct in Finland guideline (TENK, RCR guidelines 2012) states that

"Researchers refrain from all research-related evaluation and decision-making situations, when there is reason to suspect a conflict of interest. This applies to researchers also when they are working as teachers, supervisors, or experts".

Some fields have their own ethical norms and bodies that can give more detailed instructions on professional ethics on the relationship between a researcher and the object of the research.

More details: Act on Universities of Applied Sciences (932/2014)
Administrative Procedure Act (434/2004)
Responsible conduct of research and procedures for handling allegations of misconduct in Finland (RCR guideline) 2012

2. Have you familiarised yourself sufficiently with the topic?

A UAS and a master's thesis are independent research, planning, or investigative work from an area of the student's own field of study with close ties to the world of work and practice. A thesis can be involved applied study, product, service, or other development project for work. Rectors' Conference of Finnish Universities of Applied Sciences Arene Ry 2015

Different fields of training have different guidelines and recommendations on which phase of studies a student has sufficient knowledge and skill to start writing a thesis. The curricula of research programmes also includes studies that support the thesis process.

Select your thesis from a field that your professional studies has focused on. The topic can also be multi-sectoral, crossing the different fields of education. Discuss a topic that you are interested in, its selection, and setting its limits with someone, such as your tutor teacher, education coordinator, education director, or principal lecturer.
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. The key actor in the thesis process is the student. The supervisor also offers support and encouragement, while ensuring quality.

The supervisor at the university of applied sciences guides the thesis process to ensure that the thesis corresponds to the criteria set for a UAS or master’s thesis.

The collaborative partner should have a named mentor or similar person to direct the work on the thesis, who can offer the student support and a point of view related to life at work.

3. Are the resources adequate?

In limiting the subject matter and in the thesis plan the student and the supervisor should evaluate the resources required for carrying out the work (incl. human and equipment resources, costs) and the schedule, while making sure that the resources are available.

The scientific competence of a researcher responsible for research can be defined by law, as is done in law concerning medical research. Also the possible funder of the research will evaluate the scientific skills and knowledge of the research group when making a funding decision.

4. Am I familiar with research ethics?

The teacher supervising the thesis work is responsible for ensuring that the principles of research ethics are followed. The supervisor must instruct the student on the key ethical principles linked with the research process and on the permission procedure.

If the thesis is planned for implementation in a way that requires ethical advance evaluation, the student, together with the supervisor, shall apply for advance evaluation from the ethics committee.

The collaborative partner must accept that the principles of good research practice and guidelines of professional ethics as well as applicable legislation are followed in the writing of a thesis.

The supervisor of a thesis must have knowledge of

- Responsible conduct of research
- The responsibilities of a researcher and supervisor in connection with scientific practice
- The identifying features of violations of responsible conduct of research
- RCR processing in Finland and the possible consequences at a university of applied sciences
- The premises for ethical advance evaluation, the need for it, and the advance evaluation process
- The ethical norms and practices of the specific fields of science
The student writing a thesis (UAS) must master:

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

The student writing a thesis (master's thesis) must master:

- Responsible conduct of research
- The responsibilities of a researcher and supervisor in connection with scientific practice
- The identifying features of violations of responsible conduct of research
- RCR processing in Finland and the possible consequences at a university of applied sciences
- The premises for ethical advance evaluation, the need for it, and the advance evaluation process
- The ethical norms and practices of the specific fields of science

More details: Responsible conduct of research and procedures for handling allegations of misconduct in Finland (RCR guideline) 2012

Eettinen ennakkoarviointi ihmistieteissä
The support person in research ethics of your university of applied sciences
The human sciences ethics board of your university of applied sciences

5. Do I handle personal data?

- Personal data refers to information that can be identified as applying to natural persons, their characteristics or living conditions on whose basis they, their families, or those living in the same shared household can be identified. The definition of personal information includes personal information through which a person can be identified directly, but also the kind of information that enables the indirect identification of a person.

- Do not handle personal data unless you have a basis for doing so that is in accordance with the Personal Data Act.

- If the handling of personal data is necessary, ask the person being researched for consent.

- Plan the lifespan of the handling of the data in advance and describe it in the register report

- Pay heed to data protection and data security throughout the handling process

- Code the material as early as possible using a pseudonym (pseudonymisation)

- At the conclusion of the study remove identifying information from the material irrevocably (anonymisation)

- Destroy the material or save the anonymised material in long-term storage

- Make sure that the results and the publications have also been anonymised!

More details: Personal data act (523/1999)
Tietoarkiston aineistonhallinnan käsikirja
6. Do I need an ethical advance evaluation or a research permit?

In the thesis plan the student and supervisor should consider the ethics of the work and whether or not an ethical advance evaluation and/or research permit are needed.

If the thesis is planned for implementation in a way that falls within the scope of ethical advance evaluation, or if a research permit is needed for it, the student, together with the supervisor, applies for the advance evaluation and/or research permit from the ethics committee.

Further information on permits and statements concerning studies targeting people can also be found in the graph in appendix 2.

Medical research

When research involves intervention in the integrity of a person for purposes of increasing knowledge on health, the causes, symptoms, diagnostics, treatment, or prevention of illness, or the nature of disease in general, including research into treatment or health science that intervenes in the integrity of a person, research into the study of physical education and nutrition, the research falls under the Medical Research Act. In such a case an application for an ethical advance evaluation needs to made to the ethics committee of the hospital district.

More details: Medical Research Act
A regional ethical committee as mandated by the Medical Research Act

Human sciences research

The Finnish Advisory Board on Research Integrity (TENK) has given guidelines on the ethical principles of research into the human sciences (the humanities and social and behavioural sciences) to which the universities of applied sciences are committed.

The ethical principles of human sciences research are:

- respect for the right to self determination of the person being studied
- avoiding causing harm and
- privacy and data protection

The ethical advance evaluation of research included in the human sciences is conducted by the ethical committee of the unit where researcher who is conducting the research is based. In the evaluation the harm that may be inflicted on the participant from taking part in the study is to be weighed against the value of the knowledge that is being sought through the study.

More details: Eettinen ennakkoarviointi ihmistieteissä
The support person in research ethics of your university of applied sciences
Ethical committee of one's own university of applied sciences
Research permit
If the target of research is an organisation, the activities of an organisation, or its representatives (for example, personnel or students), good research practice requires that the organisation should be asked for a research permit. Permit practices and the prerequisites for granting a permit vary from one organisation to another, and it is good to agree on the required permits when the thesis agreement is made, at the latest. Although the organisation that is the target of the research grants the research permit, it is up to each individual to decide personally whether or not to participate in an interview or questionnaire.

7. Are your agreements in order?

Theses that are written at a university of applied sciences are primarily research and development projects focusing on the world of work, and genuine cooperation with the world of work is central to the entire thesis process. Before starting a thesis the sponsor, university of applied sciences, and the student sign a cooperation agreement establishing the key rules and principles linked with the thesis, such as:

- the topic and schedule
- guidance
- costs and covering them
- background material and rights to use it
- result material and related rights to ownership and use (incl. possible compensations and invention fees).
- secret and other confidential material vs. public access to the thesis
- liability and limits to liability

More details: Example of a thesis agreement in Appendix 1

8. Results of the thesis and publications

The student shall draft a work in accordance with the thesis work instruction with the student holding the copyright. Rights to access by the cooperative party are set in the cooperation agreement. When making the results public, the cooperative party nevertheless always mentions that they were the result of a thesis project, mentioning the names of the student or students who produced the thesis as well as the supervisors, as dictated by good practice (Copyright Act, Section 3, Article 1).

In addition to the text of the thesis itself, the writer of the thesis might produce materials during the process that are also protected by copyright. If the materials are produced together with, for example a supervisor, researchers, a collaborative party from the world of work, or other students, an advance written agreement should be made on using them as part of the cooperative agreement, for instance.
Authorship, as stipulated in the Copyright Act, is clearly connected to the written text or, for instance, a computer programme or graph published as part of the study. However, *authorship that is linked with scientific research and responsible conduct of research* is a broader concept affected by participation in research work, such as brainstorming and planning the study, or analysing the material. If the results of a thesis are published in a form other than that of an actual thesis, questions of authorship shall be set in accordance with the authorship criteria of the International Committee of Medical Journal Editors (ICMJE):

1. substantial participation in brainstorming and planning a study, collecting material, analysing and interpreting the material
2. writing a draft of an article or examining it critically in a way that has had a significant effect on its content
3. approving a final version for publication
4. taking responsibility for each phase of the work, making sure that responsible conduct of research has been exercised in all phases of the work.

According to the ICMJE recommendation all persons who meet the first item of the criteria must be given the opportunity for authorship. For example, in a situation in which a student has already graduated and an article is written on the basis of the thesis, the graduate must be asked if he or she wishes to participate in the writing of the article.

Possible *industrial property rights*, relinquishing them, rights of use, and possible compensations shall be agreed upon in the cooperation agreement. However, if a student is a participant in an invention that is patented, the student is always mentioned as one of the inventors.

**9. Taking care of long-term storage, opening, or destruction of materials**

A research-based thesis is planned and implemented and it is reported on, and the data material that comes about as a result are stored or destroyed in a manner dictated by requirements set for scientific information.

Follow the data security and data protection instructions, material possession instructions, and the rules of use of each service that are in force at your university of applied sciences,

**More details:** Thesis material control plan in Appendix 3

**10. Remember to report linkages**

One of the key starting points of responsible conduct of research is that sources of funding and other linkages that are important for the completion of the research are disclosed to interested parties and those taking part in the research, and that they are reported when the results are published.
11. Do not quote without permission

Responsible conduct of research requires basic knowledge of scientific writing and reference practices.

Plagiarism, or unauthorised quoting, refers to the deceitful use of the production of another person without properly notifying the original source. Plagiarism is a violation of the Copyright Act. Plagiarism is the most common type of research fraud and to prevent and identify it, theses are also checked in a plagiarism identification system before they are approved. If a thesis raises suspicions of plagiarism, the supervisor is obligated to report the matter to the rector of the university of applied sciences. The rector decides if there is cause to launch a preliminary investigation in accordance with RCR procedure.

In addition to actual plagiarism, a more extensive concept is defined in responsible conduct of research - theft, which means the wrongful presentation or use of the results of another person's research result, idea, plan, observations, or materials in one's own name.

If suspicions of theft are aroused in the thesis process, the student or supervisor must report the matter to the rector of the university of applied sciences. The rector decides if there is cause to launch a preliminary investigation in accordance with RCR procedure.

The investigation of suspicions of a violation of RCR rules, which involves the self-regulation of the scientific community, does not investigate criminal, copyright, or other legal questions which might also be connected with the alleged violation and which are handled in a court of law.

12. A thesis is a public document

A thesis written at a university of applied sciences, which leads to the conferring of a diploma is an official document under the Act on the Openness of Government Activities, making it a public document, unless otherwise stipulated (Finnish Constitution, section 12.2, Act on the Openness of Government Activities, section 1).

Universities of applied science follow guidelines set by the Ministry of Education and Culture, under which material that must be kept confidential is not included in theses, and theses are public documents once they have been approved (Ministry of Education letter to universities of applied science 28 January 2004, journal number 3/500/2004).

In the first instance, a student publishes the work in the Theseus publication archive, which is open to all, or alternatively, the student will deliver a printed version of the work to the library of the university of applied sciences, and the library will list it in its collections.

The student must ensure that the thesis submitted for evaluation and publication, does not contain information that must be kept confidential under the law, such as personal information or business and professional secrets as set in the cooperation agreement.

Supervisor teachers are obligated to maintain confidentiality over information that must be kept secret under the law, as well as all business and professional secrets of a cooperative entity (Act on the Openness of Government Activities, section 24).
The presentation of a student's thesis in a thesis seminar or equivalent event for the presentation of a thesis, is always a public event. Working together, the supervising teacher, the cooperative party, and the student set the content of the presentation in such a way that the presentation does not violate privacy of personal data, or confidentiality conditions in the cooperative agreement.

More details: Act on the Openness of Government Activities (621/1999)

13. Problems... ?

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. The key actor in the thesis process is the student. The supervisor also offers support and encouragement, while ensuring quality.

Also involved in the handling of problems related to supervision, in addition to the student and the supervisor, is some other entity, for example an administrative person responsible for education.

Suspected violation of RCR

If suspicion arises of a violation of responsible conduct of research, the student or supervisor must report the matter to the rector of the university of applied sciences. The rector decides if there is cause to launch a preliminary investigation in accordance with RCR procedure.

Suspicions of RCR violations for lower degrees shall be handled in the processes of the university of applied sciences. Suspected RCR violations connected with higher university of applied sciences degrees are investigated in a process of the university of applied sciences itself 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 investigation process for suspected violations of RCR, which is part of the self-regulation of the scientific community, does not involve investigation of matters related to copyrights, protection of personal data, labour law, or other legal questions that might be connected to the suspected violation, and which must be handled in a court of law.

APPENDICES

1. Sample cooperation agreement on a thesis involving a student, a university of applied science, and a cooperative partner
2. Diagram of required permits and statements in research targeting people.
3. An example of a material management guideline for a thesis.