



SUPERVISION OF DOCTORAL DISSERTATIONS AND THEIR REVIEW PROCESS IN FINLAND WITH A SPECIAL EMPHASIS ON RESEARCH INTEGRITY

Recommendations to universities by the Finnish Advisory Board on Research Integrity and Universities Finland UNIFI

English edition

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GLOSSARY OF TERMS: GROUPS AND INDIVIDUALS INVOLVED IN THE DISSERTATION PROCESS

Doctoral student refers to a postgraduate student studying for a doctoral degree.

Faculty council refers to the multi-member body at the university which appoints the supervisors for the doctoral student, decides on the pre-examination process, grants the permission to defend the dissertation, the pre-examiners and the commencement of the pre-examination of a dissertation, grants the permission to defend a doctoral dissertation, and appoints an opponent.

Grading committee refers to the body that proposes the grade for the dissertation.

Principal supervisor (supervisor in charge) refers to the supervisor appointed by the university for the doctoral student.

Secondary supervisor refers to a supervisor who is appointed to help the principal supervisor in the supervision and who is knowledgeable in the research field in question, in addition to the principal supervisor.

Selection committee refers to a multi-member body, such as a postgraduate education or doctoral committee, postgraduate student selection committee, research or doctoral education committee or other comparable body which is in charge of the selection of doctoral students.

Rules and regulations may vary between universities.

THE ASSIGNMENT AND THE APPLICATION OF THIS RECOMMENDATION

In 2013, a working group was formed to prepare recommendations for universities regarding the responsible conduct of research in relation to the doctoral dissertation process. The working group was appointed by Universities Finland UNIFI and the Finnish Advisory Board on Research Integrity (TENK). Although the universities themselves are responsible for the rules that regulate the various stages of the dissertation process, UNIFI and TENK hope that this recommendation will serve as a kind of 'benchmarking' document to help universities assess how their own regulations take into account research integrity in the dissertation process.

A doctoral dissertation is both a piece of research and a thesis required for a doctoral degree. The author should thus be aware of what characterizes responsible conduct of research (RCR) and recognize any deviations and violations of good research practice. Violations refer to the different types of research misconduct and disregard for the responsible conduct of research. Adherence to responsible research practices is directly related to the validity of the argumentation in the dissertation, as well as to the results of the research. Most importantly, however, RCR reflects the honesty and integrity of the author and the values and credibility of the university.

The ultimate responsibility for the quality of the dissertation rests with its author, but it is the supervisor's duty to ensure that the doctoral student is familiar with the obligations and ethical practices related to a research process. This is why these recommendations pay attention to the rights, responsibilities and obligations of all actors in the dissertation process in addition to the doctoral student. Proper management of the dissertation process is an essential part of research quality assurance at universities. It is increasingly important also to pay close attention to potential conflicts of interest when selecting supervisors and pre-examiners. This, too, is integral to the responsible conduct of research.

The dissertation supervision process must also make sure that all necessary research permits, as well as the statements from the ethical committees in medicine and related fields have been acquired for the research in question. In addition, an ethical review may be necessary for research conducted in the humanities and social sciences.

Universities are committed to TENK's guidelines <u>Responsible conduct of research and procedures for handling allegations of misconduct in Finland</u> (RCR). These guidelines describe what is meant by responsible conduct of research and obligate universities to

provide instruction in research integrity to students and teachers, as well as the experts used in the examination processes.

This recommendation has mainly been prepared with traditional academic doctoral degrees in mind but it can, when possible, also be applied to artistic doctoral degree processes.

The recommendation was prepared by a working group chaired by Chancellor Emerita Krista Varantola, Chair of the Finnish Advisory Board on Research Integrity. The other members were Secretary General Sanna Kaisa Spoof (TENK), Deputy Secretary General lina Kohonen (TENK), Docent Erika Löfström, University Lecturer (University of Helsinki), Professor Pirjo Nuutila, Director of the Graduate School (University of Turku), and Executive Director Leena Wahlfors (UNIFI). Chief Administrator Heikki Eilo (University of Tampere/University Services) served as the secretary of the working group.

Experts heard by the working group included Joanna Kumpula, Project Manager (University Admission Finland), Pirjo Kontkanen, Legal Counsel (University of Helsinki/Research Affairs), Maria Rehbinder, Legal Counsel for IPR (Aalto University), and Counsellor of Education Carita Blomqvist, Head of Unit (Finnish National Board of Education). In addition, inquiries were sent to various universities concerning their postgraduate education practices. Kirsti Suoranta, Legal Counsel for the University of Tampere, read the recommendation and provided comments. Editorial services were provided by the TENK secretariat.

This recommendation is one document in the series of documents providing guidelines for responsible conduct of research, produced by TENK in cooperation with Finnish research community. The recommendation is available in Finnish on the TENK website. When needed, updates will be provided jointly by TENK and UNIFI.

1. CONFLICTS OF INTEREST AND THEIR ASSESSMENT

Universities must ensure that all parties involved in the dissertation process declare any conflict of interest that may arise in the course of the process. Declaring a potential conflict of interest is a central principle of legal protection in administration. In practice, a conflict of interest arises when an actor or actors in the dissertation process, (the supervisor/s, pre-examiner, opponent, member/s of the postgraduate or grading committee, member of the faculty council or corresponding body (hereafter *faculty council*), administrative officials preparing the matter for decision) has a relation either to the person or issue in question that may compromise his or her impartiality. Potential conflicts of interest must also be declared when selecting the students for doctoral studies.

Conflict of interest is defined in Section 28 of the Administrative Procedure Act. For example, a close family relationship or a very close friendship constitutes a conflict of interest. Furthermore, universities have established practices and interpretations of what constitutes a conflict of interest. For example, they may recommend that the opponent should not come from the candidate's own unit or department, but preferably from a different organisation altogether. Other examples of conflict of interest may include close collaboration in a joint project or competition for the same academic post. A highly polemic relationship, of which there is strong evidence, would also indicate a conflict of interest. However, professional criticism or positive comments regarding another researcher's publications would not cause a conflict of interest between the researchers involved. A conflict of interest always involves a personal connection to the matter, and should always be assessed in light of how the situation appears to an outside observer.

Anybody who has a potential conflict of interest in a matter must declare it him- or herself. When a multi-member body (such as a faculty council or governing board) is involved, conflict of interest should always be resolved by the respective body. Allegations of conflict of interest are resolved during the handling process. Allegations of conflict of interest can also be made by an external party.

According to TENK's <u>Responsible conduct of research and procedures for handling allegations of misconduct in Finland (RCR)</u> guidelines, "Researchers refrain from all research-related evaluation and decision-making situations, when there is reason to suspect a conflict of interest". This also applies to researchers serving as teachers, supervisors or experts.

However, it is not possible for a person in an actor role to withdraw from the handling process on the basis of a conflict of interest if no real conflict exists. A conflict of interest cannot be used as an excuse for withdrawing from unpleasant decision-making. It is, however, recommended that an actor, in situations open to interpretation, declares a conflict of interest. (References include Matti Niemivuo and Marietta Keravuori: *Hallintolaki*

[The Finnish Administrative Procedure Act], Porvoo 2003, and Olli Mäenpää: Yliopistolaki [The Finnish Universities Act], Juva 2009.)

2. APPLYING FOR DOCTORAL STUDIES

2.1. The application and application procedure

An application for the right to pursue a doctoral degree at a university may be completed online or submitted as print documents. Applications are usually processed by the graduate schools and doctoral programmes that have recently been established at universities. The required appendices vary between universities. To facilitate the evaluation and comparison of applicants, requiring the following appendices is recommended:

- A preliminary research plan
- A preliminary study plan with the envisaged timeframe for the studies and their financing plan. An additional requirement might be a motivation letter describing the goals of the studies.

It is further recommended that the applicant contacts a potential supervisor prior to submitting the application for doctoral studies. Individual universities and faculties have more specific rules regarding this procedure.

On the other hand, faculties and departments should provide accurate information about the profiles and focus areas of their disciplines and research. To ensure smooth communication, this information should also name the contact persons whom the applicants can approach with their enquiries.

The applicants should also specifically state at the application stage, if they aim to earn the doctoral degree as a cotutelle or double degree either from Finland or in cooperation with a foreign university. The applicant must also inform the university if he or she already has the right to study for a doctorate at another university. An early declaration of additional study rights prevents later problems and misunderstandings.

2.2. Selection of doctoral students

The process of selecting postgraduate or doctoral students (hereafter *doctoral student*) varies from one university to another.

It is advisable for the faculties to establish a special multi-member body (hereafter *doctoral studies selection committee*), that gives recommendations on the selection of doctoral

students, in addition to the comments received from the potential supervising professor, the dean or the faculty council. Having a selection committee helps to assure the quality and objectivity of the selection process. Furthermore, it is recommended that one professor per field or subject area is appointed as the professor in charge of the evaluation of the applicants in his or her field. The professor in charge then evaluates all the applications for the field before the selection committee.

The following criteria should be observed in the selection of doctoral students

- Predefined selection criteria
- Objectivity and consistency of evaluation
- · Rules and guidelines on conflict of interest

Universities should also have guidelines about the right of the supervising professor to take part in the selection process of doctoral students in the selection committee particularly, if only a limited number of applicants can be accepted and when funding recommendations are made.

According to Section 37 of the Finnish Universities Act (558/2009), eligible doctoral students must have an applicable higher degree from a university or a university of applied sciences, or applicable education completed abroad which gives the right to study for a doctoral degree in that country. A person may also be selected for doctoral studies if the university in question finds that the applicant has acquired sufficient knowledge and experience in the field by other means.

The level of a foreign degree is often evaluated by comparing it to the Finnish M.A. level degree. Because such comparisons do not always give clear results, further help may be sought from the Finnish National Board of Education.

It is also advisable to confirm that the university that has awarded the degree is internationally recognised and that the applicant has indeed graduated from that university. All applicants may be requested to supply further information concerning their applications such as the official email address or official contact information of the institution for the verification of the degree. When necessary, University Admissions Finland verifies the authenticity of the degree certificates of international applicants. In addition to degree certificates and other documents, the authenticity of an applicant's research plan should also be verified before selection.

If a student is selected and is later found to have supplied inaccurate information that influenced the selection, the selection decision may have to be reconsidered or reversed.

3. THE SUPERVISION PROCESS AND PERSONAL STUDY PLAN

3.1. Appointment of supervisors

The procedure used to appoint supervisors varies between universities. As a general rule, supervisors should be appointed at the same time as the students are selected. Similarly, all conflict-of-interest issues should be resolved at that stage. The students must be given a chance to comment on the supervisors proposed.

To guarantee the quality of the supervision, it is recommended that the selection committee in their guidelines defines what the requirements are for:

- Adequate supervision resources for each supervisor
- Adequate supervisor expertise in the research field

It is also recommended that in addition to the principal supervisor, the doctoral student also has an official secondary supervisor who is well-versed in the field of study. The supervisor of a dissertation is usually a professor or a docent (A docent in Finland refers to a title which post-doctoral researchers can apply for after they have acquired sufficient seniority in their research). The arts fields may have different requirements for the qualifications of the supervisors.

In addition, it is possible to appoint a secondary supervisor or supervisor group to monitor the dissertation process.

It is important that supervision is seen as a continuous process. If the principal supervisor moves to another university or for other reasons stops being the supervisor, the selection committee needs to appoint a new principal supervisor who is well-versed in the field of study. The same procedure applies to other supervisors. An official decision is needed to document the change of supervisors. This is important also for the supervisors who can then list their supervisory roles in their curriculum vitae.

3.2. Supervision agreement, personal study plan and ethical review

At the start of the doctoral studies the principal supervisor and the doctoral student sign a supervision agreement and agree on a personal study plan for the student. The two documents can be combined into one document that is signed by both parties. The name and content of this document may vary according to university. It is, however, recommended that the content of the document becomes more specific as the work on the dissertation progresses.

The following points should be agreed in writing:

- The goals of the dissertation
- Expected duration of the studies
- Rights, responsibilities and obligations of the student and the supervisor
- Preparation for supervisory meetings and expectations related to the work to be accomplished by the student
- Principles of supervision and the number of supervision sessions
- The solving of problems related to supervision
- Authorship issues in the case of dissertations consisting of articles, as well of articles with multiple authors
- In the case of article dissertations, an overview of how the articles should be prepared and submitted for review
- Collection of research data, its use and reuse after the dissertation
- The role of external resources in the research (e.g. for interview-based research)
- Responsible conduct of research according to the Finnish guidelines (see www.tenk.fi)
- The need for an ethical review
- For double degrees, contract preparation and arrangements of the studies needed for the double degree and arrangements for complete

For article dissertations, the supervision agreement should specify the principles used to determine the right to authorship for co- or multi-authored articles.

It is also important for the supervision agreement to state whether the dissertation's research design needs a review by an ethics committee. Key principles in an ethical review include the autonomy of research subjects, avoidance of harm, minimising risks/negative effects, and complying with privacy and data protection requirements. The requirements for an ethical review are laid down in the Finnish Medical Research Act (1999/488).

For non-medical research, TENK has prepared its own guidelines regarding the necessity for an ethical review, <u>Ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review.</u>

For double degrees, it is also recommended that the supervision agreement includes the principles and procedures to be followed in research ethical issues. Problems may arise particularly in cases when the double degree is granted by a Finnish university together

with a foreign university. These problems may relate to the responsibilities of the different supervisors, to the procedures to be followed at the pre-examination stage, to the assessment of the dissertation, to the use of references, to student selection, to the allocation of resources, to the ways in which the study requirements can be met or to the legal rights of the students. The contract about a double degree should be signed no later than 18 months after the beginning of the studies.

3.3. Solving supervision-related problems

Any problems related to supervision should be solved with the participation of the student, the supervisor and a third party such as the faculty representative in charge of postgraduate studies. In addition, the postgraduate committee should handle questions involving the change of supervisor and ensure that a new supervisor with expertise in the field is appointed.

3.4. Research integrity training of doctoral students and their supervisors

According to the TENK guidelines on Responsible conduct of research, "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. [...] Additionally, it is the task of every research training unit to handle questions regarding the responsible conduct of research that are pertinent to the respective field of education as a part of their research training programme. 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."

Training in research integrity needs to be included in the doctoral training programme and this training should also be offered to the supervisors. The training should cover both the general principles and practices of research integrity, as well as the field-specific research ethical principles and their importance for the conduct of research.

The doctoral student and the supervisor alike should be well-versed in:

- The responsible conduct of research
- The responsibilities of the student and the supervisor in the conduct of research
- Types of violations of responsible conduct of research
- The handling of violations of responsible conduct of research in Finland and the consequences of research misconduct

- The grounds for the need of ethical review and the review procedure
- Discipline-specific ethical norms and practices

The principles of ethical review should be included in the training because a review may be required not only because of the research design, but also because an ethical review is often required by scientific journals and research funders.

4. ISSUES OF COPYRIGHT, AUTHORSHIP AND RESEARCH DATA IN DOCTORAL DISSERTATIONS

4.1. Dissertation format and definitions

The Finnish Decree on University Degrees (Amendment 19.12.2013/1039) no longer regulates the format of dissertations. Students admitted for doctoral studies are required to submit a doctoral dissertation and defend it publicly, or in other ways publicly demonstrate that they master the theoretical and artistic aspects of their field as required by the university.

Universities decide upon the format of a dissertation in their own regulations. The formats of the dissertations vary from article collections, monographs, applications, their hybrids, etc.

A dissertation is usually defined as a coherent scholarly presentation based on independent research and producing new knowledge in the field. It is recommended that the dissertation is based on a field that is a full academic subject at the university.

4.2. Copyright law and authorship

The doctoral candidate holds the copyright to his or her dissertation. This applies to both monographs and dissertations published as article collections.

According to the Finnish Copyright Act, "A person who has created a literary or artistic work shall have copyright therein, whether it be a fictional or descriptive representation in writing or speech, a musical or dramatic work, a cinematographic work, a photographic work or other work of fine art, a product of architecture, artistic handicraft, industrial art, or expressed in some other manner". (Section 1 of the Finnish Copyright Act (1961/4040)),

Maps and other descriptive drawings or graphically or three-dimensionally executed works and computer programs are also considered literary works.

Copyright gives the creator of the work the exclusive right to control the work by reproducing it and by making it available to the public, in the original form or in an altered form, in translation or in adaptation, in another literary or artistic form or by any other technique. (Section 2 of the Copyright Act)

When copies of a work are made or when the work is made available to the public in whole or in part, the name of the author must be stated in a manner required by proper usage. In addition: "A work may not be altered in a manner which is prejudicial to the author's literary or artistic reputation, or to his individuality; nor may it be made available to the public in such a form or context as to prejudice the author in the manner stated". (Section 3 of the Copyright Act)

The concept of author in research publication is different from that in copyright legislation. In copyright law the term author clearly refers to the production of written text or, for example, to the design of a computer program, figure or chart. Author in research contexts, on the other hand, also covers phases of the actual research process, such as ideation, planning and analysis.

For example, the International Committee of Medical Journal Editors (ICMJE) recommends that authorship be based on the following four criteria:

- 1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- Drafting the work or revising it critically for important intellectual content;
- 3. Final approval of the version to be published; AND
- 4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

However, definitions vary and in many research fields scientific and scholarly journals use their own guidelines to define their criteria for authorship.

If this is not the case, the general rule is that anyone who has made a substantial contribution to the research and its knowledge-creation is entitled to being a co-author in accordance with the conventions of the field.

Ideation, planning, research design and analysis are substantial contributions in the research process. When embarking on a research project, it is essential to agree, in writing, with all the project members about the principles constituting authorship for the publications stemming from the project.

If the dissertation consists of articles with joint authorship, a statement is needed e.g. by the supervisor(s) clarifying the role of the doctoral candidate in the project, as well as his or her contribution to the article in question.

It is recommended to state in the supervision agreement the principles to be followed in assigning authorship of the articles to be included in the dissertation. Likewise, it is important to specify how other contributions to the article are to be recognized.

4.3. Agreements about the use of data

A doctoral student may produce material or data for his or her dissertation that is protected by copyright. A written agreement is necessary if this material is produced together with other researchers. The agreement needs to specify the rights to the use of data or material during the research and its reuse.

According to the Copyright Act, creator rights belong to those who have made an essential and original contribution to creating the work. The rights to the use of data produced jointly and protected by copyright are always decided upon jointly, unless otherwise agreed. **If no** proper written agreement exists, disagreements may arise as to the authorship of publications based on the data and the reuse of the data.

If a doctoral student uses in the dissertation material from external sources, such as photographs, he or she needs to acquire a permission from the copyright owner for the use of this material. Honouring copyright is particularly important, if any external material is included in the dissertation. In addition, the doctoral student must make sure that he or she has acquired all the necessary permissions from publishers (e.g. song lyrics) and has taken into account any non-disclosure agreements with companies.

When the right to use of external material is based on a written agreement, the agreement should specify the limits to the use of this material. Different copyright rules may apply, if internet material (e.g. photographs) is downloaded. They should be checked from the web page.

4.4. Storing research data

The storing, archiving, reuse or ownership of research data should be agreed upon separately, on a case-by-case basis. For example, medical research is strictly regulated and research data are stored for an extended period of time. Research data in other disciplines should also be stored for further use and potential checks about the integrity of the data.

5. STAGES OF THE PRE-EXAMINATION PROCESS

5.1. Preparatory measures and plagiarism detection

The doctoral candidate is responsible for the content of his or her work. The official supervisors are responsible for ensuring that the work is of a high enough quality to be submitted for pre-examination. The candidate is also responsible for making sure that the linguistic standard of the work is acceptable. A language check may be required if the dissertation is written in a language that is not the author's native language. Proofreading is also recommended after pre-examination corrections.

It is advisable to state in the faculty's pre-examination guidelines who is responsible for providing more detailed information about the criteria used in the examination process and the process itself. This is particularly important for foreign pre-examiners. However, it is necessary to take into account potential conflict-of-interest concerns, if the person in question is the professor who has acted as the supervisor of the dissertation.

The following preparatory measures are needed before the manuscript is submitted for pre-examination:

- 1. The principal supervisor and the candidate have a discussion about potential preexaminers and make sure that no conflict of interest arises
- 2. When the dissertation consists of a collection of articles, the principal supervisor gives the candidate the permission (separately for each manuscript) to send the article manuscript to a publisher. The supervisor should, however, not without good grounds, prevent the submission of a manuscript and delay its publication. Ultimately, it is the candidate's right to decide on a suitable publication channel.
- The principal supervisor decides preferably together with other supervisors or the head of the doctoral school, when the dissertation manuscript is ready for submission. The submission of the manuscript should not be unnecessarily delayed.
- 4. The supervisors ask potential pre-examiners in advance, if they are willing to take on the task and may discuss the contents of the work with them before the manuscript has been submitted.
- 5. Before final submission, the manuscript should be checked using a plagiarism detection software. Plagiarism detection is useful at this stage of the process, since intervention is still possible through supervision. The report generated by the software needs to be analyzed together by the candidate and the supervisor and discuss potential problems related to research integrity.

It is the duty of the principle supervisor to assess whether the manuscript (including figures, references and appendices) fulfils the criteria for responsible conduct of research (see <u>TENK guidelines</u>).

It should be noted that a high match rate indicated by plagiarism detection software does not necessarily indicate plagiarism. It is necessary for the supervisors to interpret the results.

In the case of a double degree, the supervisor at the foreign institution should be notified about the use of plagiarism detection software in the examination process.

5.2. The dissertation manuscript and violations of the responsible conduct of research

It is recommended that the supervisor gives a short, written comment on the results of plagiarism detection, as well as a more general comment whether the manuscript adheres to the principles of responsible conduct of research (see <u>TENK guidelines</u>).

If there are no objections in the assessment, the manuscript can be sent for preexamination.

If the assessment indicates that there are problems related to research integrity, the supervisor(s) need to report about their findings to the faculty. At this stage, also the Rector of the university needs to be notified about the situation. The Rector will then decide how to proceed in the matter according to the TENK guidelines <u>Responsible</u> <u>conduct of research and procedures for handling allegations of misconduct in Finland</u> (RCR).

Dissertation manuscripts are not public documents before pre-examination and the faculty council's permission to defend the dissertation.

5.3. Pre-examination process

The candidate may submit the dissertation manuscript to the faculty for pre-examination after the supervisor's/supervisors' approval. The faculty then forwards the manuscript to the pre-examiners with guidelines about the procedure and assessment criteria.

When submitting the manuscript for pre-examination, the candidate should also declare in writing that he or she has not previously submitted it for pre-examination at another university. It is also recommended that the candidates at this stage also declare that they have followed the principles of responsible conduct of research and that they are solely responsible for the contents of their manuscripts.

There are field-specific variations in the pre-examination process. The following practices are important for quality control and responsible conduct of research:

- It is checked whether the proposed pre-examiners have any conflicts of interest. The decisions about pre-examiners are made at faculty level.
- The pre-examiners give a statement about the manuscript but do not act as supervisors in the process. The supervisors or pre-examiners are not allowed to use in their own research any results, ideas, designs, observations or material present in the manuscript without due acknowledgement and without the consent of the candidate.
- If the supervisor is a co-author in an article included in the dissertation, the candidate's own contribution to the article must be clarified. Likewise, it is important to specify the role of the candidate in the research project providing the framework for the dissertation.
- It is recommended for the sake of the integrity of the process that the candidate has
 no direct contact with the pre-examiners during pre-examination. The supervisor
 needs be informed if the pre-examiner wants to contact the candidate during the
 process. The pre-examiners should also mention in their statements the reasons for
 such contacts.
- Most Finnish universities expect the pre-examiners' statements to be nonconditional and either recommend the manuscript for public defence or advise against granting this permission. Suggestions for minor amendments and for technical corrections are, however, possible and the candidate may take them into account.
- The time allocated for pre-examination is determined by the faculty unless the
 university has a uniform policy in the matter. A two-month period is often considered
 reasonable but is negotiable. The main thing is that there are no long delays
 causing harm to the candidate.

A new pre-examiner may be appointed if the pre-examiner fails to provide a statement within a reasonable deadline and without an acceptable reason.

5.4. Granting permission to defend the dissertation and other procedures following pre-examination

- 1. The pre-examiners send their expert statements to the faculty who forwards them to the candidate. It is important that the candidate is the first person to see the statements about his or her work.
- 2. The candidate has the right to respond to the pre-examiners' statements in writing
- 3. If the pre-examiners' statements are favourable, the matter advances to the faculty council, or the unit deciding on the permission to defend the dissertation. The faculty council may suspend their decision if further clarifications are needed on the basis of the candidate's response to the pre-examiners' statements.
- 4. The pre-examiners' statements are important from the standpoint of the candidate's legal rights, since the decision of the faculty council means that the manuscript meets the minimum requirements for doctoral dissertations and the process can go forward.
- 5. If a pre-examiner's favourable statement includes suggestions for improving the manuscript, the candidate may want to discuss these with the principal supervisor. However, the final decision regarding changes is at the discretion of the candidate.
- 6. It is possible that minor technical errors, such as typos, remain in the finalized manuscript. The candidate may want to correct these before the public defence by bringing a so-called errata to the defence. However, it is not acceptable to make major corrections to the dissertation through the errata list. If major problems come to the fore during the period when the dissertation is publicly available for scrutiny, it is advisable to discontinue the process till the problems have been solved. It is recommended that universities have their guidelines for the use of errata lists.
- 7. If one or both of the pre-examiner statements are against accepting the manuscript for defence, the candidate has the right to issue a statement justifying why the permission to defend should nevertheless be granted. These types of justification are rare and usually based on a grave error or misunderstanding in the pre-examiner's statement.
- 8. In effect, permission to defend the dissertation would not be granted in the aforementioned situations, so it would be appropriate for the candidate to withdraw the work from the pre-examination. In this case, the handling of the matter is discontinued and the supervision process between the supervisor and the doctoral student resumes.
- On occasions like the above, it is advisable for the candidate to withdraw the manuscript from pre-examination and interrupt the process. The process only continues after the problems have been solved in cooperation with the supervisor(s).
- 10. The acceptance procedure is repeated after resubmission.

Breaches of responsible conduct of research are sometimes noticed at the preexamination stage. It is then essential that the pre-examiners immediately report their findings to the faculty. The pre-examination process must be interrupted and the matter brought to the Rector's attention who will instigate the pre-investigation process according to the <u>TENK guidelines</u>. A permission to defend is not possible in such a situation.

If the right to defend a dissertation manuscript has not been granted at one university for any reason (e.g. the low quality of the work or an RCR violation), it cannot be accepted for review at another university without justification.

6. PUBLICATION OF A DISSERTATION AND ITS AVAILABILITY BEFORE PUBLIC DEFENCE

6.1. Dissertation publication options

It is up to the candidate to decide how he/she wants to publish the dissertation. For example, a monograph, for example, can be printed, saved in digital format, published online or saved as an unprinted manuscript.

The Academy of Finland recommends online publication to promote open access and availability of research knowledge. However, publishing the dissertation online is not mandatory if there is a justifiable reason for this.

Practices vary if the articles are in the 'submitted' phase. They are then part of the dissertation and the doctoral candidate may decide not to publish them online. Usually the copyright of submitted articles still belongs to the author.

Most international publishers give authors the permission to include an unpublished article in a dissertation as the 'pre-print' version of a forthcoming publication (not yet peer-reviewed) or as the 'post-print' version (the version edited by the author on the basis of reviewer comments).

6.2. Availability of dissertations before the defence

A dissertation must be made available to the public and to the research community for a predetermined period of time before its defence. Universities are free to determine how this procedure takes place. Since a dissertation is a public document it should not include classified or confidential information. Information in a dissertation may be declared confidential or classified only in exceptional cases. This information may in no way have an effect on the public evaluation of the dissertation.

7. EXAMINING AND GRADING A DISSERTATION

7.1. Opponent and grading committee

The opponent (opponents) is appointed by the faculty council. It is strongly recommended that the opponent does not come from the home university. It should also be checked that the opponent has not taken part in the supervision of the work and that no other conflicts of interest exist. A joint article with the doctoral candidate would, for example, constitute a conflict of interest.

Universities use various ways of grading and specific grading scales to assess a dissertation. The opponents (in particular international opponents) should be provided with appropriate guidelines for their assessments. It has also become a common practice to appoint, in addition to the opponent(s), a specific grading committee to assist the opponent(s) in preparing the grade proposal. In the process, it is essential to define the relationship between the opponent(s) and the grading committee and to pay attention to the following aspects:

- The grading committee should consist of recognized experts in the discipline. It is recommended that the members include, in addition to the opponent(s), other experts such as those who have acted as pre-examiners of the work or who have otherwise been involved in the process. It is strongly recommended for all the committee members to be present at the oral defence.
- The Custos (usually the supervisor of the thesis and professor appointed by the faculty to act as the official chair of the examination) may be present at the grading committee meeting but not participate in the assessment or grading of the dissertation.
- The main role of the grading committee is often to validate the opponent's/opponents' statement and grade proposal and, if necessary, issue its own statement.
- The relationship and roles of the grading committee and opponent may also be defined in other ways.

7.2. The oral defence of the dissertation

The defence of the dissertation is an oral examination of the candidate's thesis that is open to the public. The event is chaired by the Custos.

The opponent's task is to examine the dissertation and evaluate its quality. Afterwards the opponent(s) prepare a written statement about the dissertation. The statement may only discuss issues that were taken up at the oral examination and which the candidate was thus able to address. The opponent's statement should be promptly submitted to the faculty.

In exceptional circumstances, an international opponent may have to participate in the examination through a video link. In such cases it is advisable, to guarantee the doctoral candidate's legal rights, to record the oral defence.

It is recommended for the Custos to prepare a report of the oral examination that mentions the following:

- The details of the public examination procedure
- Any external oral comments from the public concerning the dissertation.

If an 'external' opponent's comments deal with unethical conduct and are lengthy and detailed, the Custos needs to request the comment to be submitted in writing (with a short deadline). The written comment must conform to the original oral comment in form and content. Any external comments should be investigated and brought to the faculty council's attention. If necessary, the faculty council may suspend the process for further investigation.

If the doctoral candidate aims for a double degree involving a Finnish and an international university, the procedural aspects about the dissertation process need to be agreed on in advance. Essential issues to be decided on include:

- The grading scale
- The form of the dissertation defence including the public examination, if the defence takes place outside Finland.

7.3. Assessment of the dissertation in the faculty council

The candidate has the right to review the opponent's statement and proposed grade before the matter is discussed in the faculty council. The candidate also has the right to comment on the statement, ask for postponement of the decision and file a complaint if he/she is not satisfied with the statement. It is important to make sure that there are no conflicts of interest when the final decision is made.

Some Finnish universities allow the supervisor (if he/she is member of the faculty council) to participate in the assessment of a dissertation. This should, however, not be allowed if there is any disagreement about the grading.

It is not possible, without due justification, to resubmit a dissertation to another Finnish university if it has been failed at one university.

7.4. Special situations in the assessment of dissertations

It is very rare for the faculty council to deviate from the grade proposed by the opponent or the grading committee. In such cases, the faculty council needs to justify its decision convincingly. If the lowest grade is proposed, for example, the dissertation should at least not be rejected, since the opponent and grading committee must have proposed the grade for good reason. The decision must take into account the student's interests and legal rights as well as the legal concept of legitimate expectations.

A dissertation may be failed by the faculty against the opponent's or grading committee's recommendation for a justified reason, for example

- When a serious violation of the responsible conduct of research (RCR), such as
 plagiarism, is detected and verified (normally on the basis of an external allegation),
 for the first time after the oral defence but before the faculty council's decision. If
 any violation or disregard of the responsible conduct of research is suspected, the
 Rector must initiate the RCR process in accordance with the <u>TENK guidelines</u>.
- The dissertation examination process is suspended for the duration of the RCR process.

The situation is more problematic if the dissertation includes co-authored articles and an RCR violation is detected for which the candidate is not responsible. If the roles and responsibilities of the co-authors are not clearly specified in the article, all authors are considered equally responsible for the accuracy of the information in the whole article.

If a suspicion of an RCR violation arises after the approval of the dissertation, it is the university's responsibility to initiate a standard RCR process in the matter and decide on the sanctions when necessary.

8. THE RESPONSIBLE CONDUCT OF RESEARCH AND VIOLATIONS THEREOF

8.1. The responsible conduct of research

The dissertation process involves many parties, but the primary responsibility for the dissertation, its text, figures, tables and references rests with the author of the dissertation. The author is also responsible for the research data and research results and their analysis. The principles of the responsible conduct of research must be followed at all stages of the dissertation process.

The principles of responsible conduct of research lines must be integrated in the supervision process of dissertations. They are defined in the TENK guidelines <u>Responsible</u> <u>conduct of research and procedures for handling allegations of misconduct in Finland</u>. The principles are based on the self-regulation of the research community. All national research organizations are committed to following these guidelines.

The doctoral candidate is obliged to follow the principles of responsible conduct of research defined in the TENK guidelines as follows:

- Principles endorsed by the research community are followed: integrity, meticulousness and accuracy in conducting research and in recording, presenting and evaluating the research results.
- The methods applied for data acquisition, as well as for research and evaluation, conform to scientific criteria and are ethically sustainable. When publishing the research results, the results are communicated in an open and responsible fashion that is intrinsic to the dissemination of scientific knowledge.
- The researcher takes due account of the work of other researchers by respecting their work, citing their publications appropriately and giving their achievements the credit and weight they deserve in carrying out the researcher's own research and publishing its results.
- The researcher complies with the standards set for scientific knowledge in planning and conducting the research, in reporting the research results and in recording the data obtained during the research.
- The necessary research permits have been acquired and the preliminary ethical review that is required for certain fields of research has been conducted.
- Before beginning the research or recruiting the researchers, all parties within the
 research project or team (the principal investigator, team members or perhaps the
 employer or commissioning party) agree in a mutually acceptable manner on their
 rights, responsibilities and obligations, principles concerning authorship and

questions concerning archiving and accessing the data. These agreements may be further specified during the course of the research.

- Sources of financing, conflicts of interest or other commitments relevant to the conduct of research are announced to all members of the research project and reported when publishing the research results.
- Researchers refrain from all research-related evaluation and decision-making situations when there is reason to suspect a conflict of interest.
- The research organisation (research teams included) adheres to good personnel and financial administration practices and takes into account the data protection legislation.

8.2. Violations of the responsible conduct of research

Violations of the responsible conduct of research refer to unethical or dishonest practices that are detrimental to research in the sciences or arts. Such violations may be intentional or due to negligence. In Finland, RCR violations are divided into two categories:

- Research misconduct
- Disregard for the responsible conduct of research.

These may occur at various stages of research. The supervisor of a dissertation must be aware of the various manifestations of RCR violations.

A candidate could violate RCR even by presenting his or her own previously published results for the same topic as new information in a dissertation. This is called 'self-plagiarism' and is considered to be disregard for the responsible conduct of research, according to the TENK guidelines.

The RCR requirement applies to all dissertation research, regardless of the form that the dissertation takes. However, in terms of article dissertations, dissertation authors and their supervisors should pay particular attention to the considerations above. If the articles of an article dissertation are joint articles, questions of authorship and data use also require attention.

Authors: Finnish Advisory Board on Research Integrity and Universities Finland UNIFI

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