University of Freiburg
Faculty of Environment and Natural Resources
Chair of Forest and Environmental Policy
[Website link](#)

Guidelines for writing your thesis

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What to expect from these guidelines

Your thesis is a major step in your academic education. Its completion requires a wide spectrum of new skills and professional interaction with academic supervisors and advisors. This document should function as a support for your research and thesis work conducted at the Chair of Forest and Environmental Policy. It contains guidelines for good scientific practice and practical tools for your thesis project. With this document we wish to convey what is expected of you as a student and what role your supervisors play in the project. This document complements the official study and exam regulations of your study program.

Please remember that these guidelines are valid <u>only</u> for theses conducted at the Chair of Forest and Environmental Policy, University of Freiburg. Guidelines at other chairs at the faculty and university might differ significantly from what is written here.

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[1] These guidelines are based on the writings of Dr. Olga Malets (now Technischen Universität München), Prof.Dr. Heiner Schanz (Chair of Environmental Governance), Dr. Dirk Ifenthaler (now University of Mannheim) and of J.-Prof. Dr. Stefan Pauliuk (Industrial Ecology Group). Their writings have been adjusted and complemented by the colleagues at the Chair of Forest and Environmental Policy.

Contents

1. What is the thesis all about?

Writing your BSc or MSc thesis is of course a formal requirement for receiving your degree at the university, but also many people see the writing of a thesis as the coronation of higher academic education. And indeed, the importance of the thesis work is reflected by the prominent role it takes within education. After completing compulsory and elective modules in the educational program, the thesis offers the challenge to set up and to carry out a scientific research project in an almost fully self-responsible manner.

Learning objectives of your thesis project are as follows:

In carrying out your project you should demonstrate adequate-excellent skills in…

- assuring the delineation and definition of a research topic,
- conducting a comprehensive literature review on a selected topic,
- formulating appropriate and manageable research objectives and research questions,
- building a sound theoretical framework guiding the research,
- collecting data in a systematic and verifiable manner,
- analyzing the data critically,
- presenting the results comprehensively,
- drawing sound conclusions based on a comprehensive discussion of the results, and showing a potential contribution of the research to the theoretical reconstruction of the topic.

Differences between doing a masters and a bachelor thesis:

- MSc thesis = 6 months & BSc thesis = 3 months,
- The project should always be developed to fit the time frame. Due to less time for the bachelor thesis this will be smaller in scope. Based on experience we can say that a bachelor thesis is normally ca. 35-55 pages and a master thesis 50-80 pages. **Individual bachelor and master thesis can however differ from these numbers without it being a problem!**
- For the master thesis it is expected that the student demonstrates skills on the application of theoretical frameworks.

2. How to get assigned a thesis topic?

The Chair of Forest and Environmental Policy offers supervision of high quality, enabling students to contribute to ongoing research, utilizing synergies between their own work and other projects, and facilitating exchange of ideas and skills within the group. Therefore, all thesis topics need to fit into the group's research profile. You find more information about the chair's research on our website (C.F.E.P. Research).

Thesis topics are announced by the chair and its individual researchers or can be self-defined and then approved by the prospective supervisor(s).

Predefined topics: These topics have been carefully chosen to enable students to contribute to cutting edge and relevant research. High quality work on these topics can sometimes contribute to an ongoing research project and/or a peer-reviewed publication afterwards. A

list of current thesis topics with detailed descriptions is available on the chairs' website ([C.F.E.P. Thesis Topics](.)). If you are interested in conducting one of these projects, please contact the responsible researcher.

Self-defined topics: We also offer the possibility to define a self-chosen topic in dialogue with a prospective supervisor. This pathway to the thesis requires special engagement, the capability to autonomously scope the topic after studying the literature, and the involvement of external experts on the topic. If you are interested in a specific topic of your own interest, please contact a researcher that you think would be interested to supervise you and your topic of choice. You find all our researchers, their research profiles (topics and methods) and their contact information on our website ([C.F.E.P. Team](.)).

For both pathways you will need to prepare a detailed proposal (also called exposé), please see section 4.2 in this document for further instructions about the proposal.

3.   How does the supervision work?

In this section we describe our understanding of the roles of student and supervisor during the thesis process and the different responsibilities for both.

The role of the student

A thesis is an independent piece of work according to established scientific standards in the specific discipline. The main responsibility for finishing the project lies with the student. Taking responsibility for one's thesis or project means to own your work and its intellectual framing, to hold your views and decisions as your own, and to be in charge of the whole process. Being in charge is especially important, and as the person responsible for your thesis, you are responsible for all the different steps, including the reflection about what to do and why and how, the actual work and its documentation, and the process of seeking feedback from the supervisor and others. Being in charge also means to take responsibility for the decisions made during the different steps. The decisions will often be strongly influenced by the supervisor because of his or her longer experience, but in the end, you have to stand up for the decisions taken – it is your work.

The student is responsible for…

- Starting the project (registering) at an appropriate time point,
- Finishing the project on time,
- If necessary, due to illness or other circumstances, to apply for prolongation of the time,
- Monitoring the progress of the work and keeping up to date with the different deadlines and regulations,
- Finding a second referee and supervisor (Zweitgutachter/in),
- Own motivation,
- Knowing how to write scientific texts (see section 4.6 about courses and resources),
- Making good use of the time the supervisor dedicates for your thesis,

- Responding to supervision and advice given (if not directly changing research steps and text according to the supervisors advise, then at least being able to argue for why not following said advise),
- Preparing well for each meeting with the supervisor,
- Communicating to the supervisor(s)…
    o Problems, e.g. with the research, writing, and project progress,
    o If deadlines will be reached - or not,
    o Which input is needed from the supervisors, e.g. comments on text sections.

The role of the supervisor

During the thesis and project period, the role of the supervisor is to be an advisor offering guidance throughout the process, but also to be the examiner and grade the thesis in the end. Therefore, always discuss the grading with your supervisor at an early stage and ask her/him about their expectations for the thesis, what part of the thesis they give more weight to in their grading etc. Interactions and communications between supervisor and student can take place in meetings (face-to-face or online), emails, or through comments in texts, depending on the wishes of both.

The 1st supervisor is responsible for…

- Making a good effort to understand the state of the student's work and the pending problems,
- Offering solutions to scientific and practical problems related to the project,
- Suggesting further ideas to develop the thesis beyond the current knowledge of the student,
- Providing key-literature sources that are missing after initial literature reviews,
- Giving technical advice when needed to progress the research,
- Giving advice about the scope of the thesis so that it is feasible within the given time frame,
- If needed, discussing and clarifying the grading scheme.

Except for being the second examiner of the thesis **the role of the 2nd supervisor** is very much up to the 1st supervisor and the student and their joint wishes in relation to the specific thesis project. Maybe the second supervisor is picked because she/he has certain necessary and complementary competences, or the second supervisor is never involved in the actual process and only does the grading in the end. **The choice of second supervisor should always be discussed with and approved by the 1st supervisor before submitting your registration to the examination office!**

Getting off to a good start

It is beneficial to the process if you early on in the process clarify your different expectations with your supervisors. Here are a few questions to think about for yourself and then discuss with your supervisor(s):

- What are my expectations for the thesis research and writing process?
- What part of the thesis does the supervisor give more weight to in her/his grading?
- What experiences do I have of supervision from my previous studies?

- What type of feedback do I need and want? (e.g. written format, discussions face to face/online)
- How often do I expect to get feedback and support?
- What support do I expect from the second supervisor? (e.g. regular check-ins, nothing at all until the grading?)

4. Good scientific practice

4.1. Our expectations for your scientific work

In a nutshell, students are expected to design and conduct a solid research project based on a sound research methodology, including a theoretical framework and proper methods of data collection and analysis. In other words, they are required to come up with a sound research question, select an appropriate theoretical framework and methods, collect and analyze data, and draw convincing conclusions.

Students are NOT expected to develop a new theory or method in their master's theses (unless they are specifically interested in it and a supervisor is willing to supervise such a study). A theoretical reconstruction of phenomena and the eventual development of innovative methods and theories stand central in doctoral studies and later on in the career in science. Students are expected to apply existing appropriate methods and theories to a real-world phenomenon. In sum, students are required to construct at least a sound research approach, including a theoretical framework and proper methodology, in order to fulfill the requirements for a thesis.

The students should keep in mind, however, that concrete requirements for the theoretical, methodological and empirical work for a thesis may vary among individual supervisors. Thesis research objectives, questions, theoretical foundations and methods should therefore always be discussed directly with the prospective supervisor.

4.2. What to think about when developing your research proposal (exposé)

Before starting the project, all thesis candidates must prepare a written thesis proposal that covers the following points in 3-5 pages:

- The topic of the thesis and why it is important (problem statement),
- Literature review of the core literature,
- The identification of the research gap(s),
- Formulation of aim(s) and research questions,
- Specification of the preliminary choice of method(s),
- An overview of the expected results,
- Reference list,
- Targeted timeline,
- First draft of table of content.

The proposal is given to the prospective supervisor and is used as a basis for her/him to decide upon accepting your project or not. The exposé shows the supervisor that you can master your topic and that you are capable of searching and selecting relevant literature. Also, an exposé is a good indicator of your writing skills. A good level of academic writing is a

prerequisite for getting accepted by most supervisors. You might be asked to revise the proposal until the supervisor is satisfied with it, or you are told to go ahead with the registration and thesis project whereupon you can use the proposal as the start of your thesis writing (typically as part of the introduction and methodology sections).

Time planning

It is important to plan the different parts of your thesis according to the total time that you are given (6 or 3 months). Some parts will take more time than others and the time designated to the different parts always depends on the type of research you will be doing. Here are two examples of time schedules and distributions, but please discuss this with your supervisor.

BSc thesis: Example 1 - A literature review

Month	1		2		3	
Literature review	■	■	■			
Writing		■	■	■		
Finalise thesis					■	■

BSc thesis: Example 2 - Empirical work

Month	1		2		3	
Literature review	■					
Data collection		■	■			
Analysis			■	■		
Writing	■		■	■	■	
Finalise thesis						■

MSc thesis: Example 1 - A literature review

Month	1		2		3		4		5		6	
Literature review	■	■	■	■	■	■						
Writing			■	■	■	■	■	■	■	■		
Finalise thesis											■	

MSc thesis: Example 2 - Empirical work

Month	1		2		3		4		5		6	
Literature review	■	■										
Data collection			■	■								
Analysis					■	■	■					
Writing		■		■		■	■	■	■	■		
Finalise thesis												■

4.3.   Developing a good research aim, research questions and hypotheses

The heart of any research project - and of your proposal/exposé - is the research aim, research questions and, possibly, your research hypothesis. The research aim is supposed to be broader than the research questions and expresses the intention or your aspiration of the research study. Your aim should summarise in a single sentence what you hope to achieve at the end of your research project. Your research questions should then fit under the umbrella of your research aim and by answering your research question(s) you should achieve the aim. If you have a research hypothesis, this should be a specific and testable proposition or predictive statement about the possible outcome of your research. A well-formulated

research aim and questions are the foundation of a good research project. Or as Albert Einstein said:

"If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and five minutes thinking about solutions".

That is what formulating a research aim, questions and hypotheses are all about – to figure out what problem you actually want to research. What is the core of the problem you would like to solve? The time you spend on finding and reformulating your research aim and questions will save you time later.

The first step to a good research question is to create a bucket list of research questions - just BRAINSTORM all the questions you can think of - sit down and write EVERYTHING that comes to your mind about the topic that you have chosen. Later on, you can look at what you wrote down and pick the ones you think are the most interesting, feasible etc. And then, you can reformulate them, combine and divide them into sub-research questions. This is an iterative process where you go over the questions several times until you and your supervisor are satisfied. The golden rule is to have neither too broad nor too narrow research questions.

There are many different **criteria for developing good research questions**. It is good to discuss this with your supervisor. Most researchers and supervisors agree that your research questions should be *feasible* and with that we mean that they should be…

- Understandable and provide clarity.
- It should be feasible to access data to answer the question.
- To answer the question is affordable in time and money.
- Manageable in scope.

Typical qualitative research questions: why-questions focusing on meanings, practices and contexts.

Typical quantitative research questions: questions focusing on frequencies and distributions; how many?, how frequent? or how big?, type of questions.

You can read more about how to create good research questions in these three sources:

- Booth, W.C., Colomb, G.G. and Williams, J.M. (2008): *The craft of research*. Chicago: University of Chicago Press, pp. 29-67. doi: 10.1177/027046769701700439
  Accessible at UB Freiburg: kid:1611666236
- Flick, U. (2015): *Introducing research methodology: a beginner's guide to doing a research project*. 2nd ed. London: SAGE, chpt. 4.
  Accessible at UB Freiburg: kid:819887684
- Walliman, N. (2011): *Research methods: the basics*. London: Routledge, pp. 7-28. doi: 10.4324/9781315529011
  Accessible at UB Freiburg: kid:627632718

4.4. What should the thesis include?

Structure & formal content

We are not going to describe in detail about the generic structure of a thesis and what you should write where, and in which tense, present or past time, etc. The University of Freiburg has some formal requirements and guidelines that you can find here:

- https://uni-freiburg.de/forschung/redlichkeit-in-der-wissenschaft/

More general information you can easily find online – two good example of thesis structure instructions you can find here:

- https://libguides.usc.edu/writingguide/purpose
- https://guides.library.harvard.edu/c.php?g=842673&p=6022504

Your supervisor might also have her/his own ideas for how to structure and write-up your thesis so please communicate about this!

Language

Theses and projects at the Chair of Forest and Environmental Policy can be carried out in English or German. Some supervisors may prefer one or the other language so please communicate about this beforehand. In German (but also in English) speaking theses you will have to decide for yourself, and in consultation with your supervisor, if you want to apply gender-inclusive language in your thesis. For further information see for example gender-inclusive writing tips for English academic writing and for German academic writing.

Abstract, table of content, lists of abbreviations, figures, and tables

Your thesis needs an abstract in the language of the thesis. An additional abstract in another language is optional. These need to have a table of contents that shows the structure of the report in a meaningful way. A list of abbreviations, a list of figures, and a list of tables are not mandatory.

References and citation style

All references cited need to be official documents that can be attributed to individual authors and organizations. That excludes Wikipedia and similar sources. Wikipedia can of course be used during research, but all information provided there needs to be critically reflected upon and traced back to the original literature sources. There is no prescribed citation style, but the style chosen needs to be one of the recognized official ones.

Citation styles and reference management

There is no right or wrong citation style, we all have our preferences and you can decide which established citation style that you would like to use. What is important is that you are CONSISTENT when citing your sources. Therefore please follow any of the common styles of referencing (e.g. Harvard, APA or Chicago) and we recommend to use a reference and citation manager software.

Recommended guides to citation styles and reference managers:
- Overview: https://www.citethisforme.com/guides

- Citavi (free for students):
  https://www.rz.uni-freiburg.de/services/beschaffung/software/citavi
- Mendeley citation manager: https://www.mendeley.com/
- Zotero citation manager: https://www.zotero.org/
- Endnote citation manager: http://endnote.com/
- Bibtex citation style: http://www.bibtex.org/

4.5. Finding literature for your research

Beside the catalog of the Library at the University of Freiburg (https://www.ub.uni-freiburg.de), we encourage you to use other search engines and databanks, including (but not limited to):

- ISI Web of Knowledge/Web of Science/Social Science Citation Index:
  o https://login.webofknowledge.com
  o https://clarivate.com/webofsciencegroup/solutions/web-of-science/
- Science buddies:
  http://www.sciencebuddies.org/science-fair-projects/top_science-fair_finding_scientific_papers.shtml
- Karlsruhe Virtual Catalog: https://kvk.bibliothek.kit.edu/index.html?lang=en
- Collection of databanks:
  http://rzblx10.uni-regensburg.de/dbinfo/fachliste.php?bib_id=ubfre&lett=l&colors=&ocolors=

You can always attend a library tour or a literature search and management workshop to make the most of the opportunities offered by the University Library. Do not hesitate to contact librarians if you have questions or need help.

4.6. Writing up your research - tips and tricks

The writing of your thesis is NOT something you just do at the end of the project. You will write ALL the time, different sections at a time. Your exposé becomes part of your introduction and you write your methodological section as you go.

Here we want to emphasize how to **make your thesis a good read**. This might seem irrelevant as most of us do not read research for fun. At least not in the same way as one reads a novel. But it is nevertheless important to write well also when writing up your research. If you can write-up your research in an accurate, precise, and coherent way, your research will be easier accepted and read by more people. And the writing style is actually part of the grading of your thesis (see section 5.2).

To begin with, any good writing is about having **a golden thread** - a coherent and logical line of argumentation (In German, "rote Faden"). This means that you take the reader by the hand and guide them through what you want to say. This means to start with information that is easily accessible to the reader. In principle, you will always start with something more general and gradually become more specific. Start a paragraph with a general statement that

you then develop and connect to the next paragraph. Guiding your reader can also be to give interesting headlines to the different sections of your text.

Some good advice for how to get your good-writing going is to:

Keep it simple:

- Write simple sentences,
- Write simple paragraphs with <u>one</u> message only.

Keep it logical and coherent:

- Move from general to specific information,
- Put old or given information before new information,
- Introduce new ideas to your reader through informative titles, subheadings, starts of sections.

Don't forget to **set aside time for revising and rewriting** after you've written the entire thesis! Ask a friend to review your thesis and review theirs in turn. That is great training and help for both of you! Whoever reads your text voluntarily, please remember to appreciate their comments, time and effort they put into understanding your work.

Use all the help you can get! Online you find many tools such as Thesaurus, and Oxford Collocations to help you with the English language.

All practice helps! Write, write, write is our golden advice for learning how to write good texts in general. In addition, as a help to acquire the *know-how* of good scientific writing, we recommend having a look into some of the following resources and texts.

Courses and resources offered at the University of Freiburg
You can take courses offered at the university to learn key research and professional skills such as writing. These courses are called Berufsfeldorientierte Kompetenzen, or **BOK-courses** in short. You find more information here: http://www.zfs.uni-freiburg.de/de/bok. Also the university library is offering tutorials for students. You can find more information here: https://www.ub.uni-freiburg.de/unterstuetzung/tutorials/wissenschaftliches-schreiben/

Other good guides to good scientific writing
- The Science of Scientific Writing: link
- How to write clearly: link
- Using tenses in scientific writing: link
- Academic Phrasebank: http://www.phrasebank.manchester.ac.uk/
- Blog post: Structuring your writing with the help of Storyboarding: link
- Blog post: Novelist Cormac McCarthy's tips on how to write a great science paper link
- Blog: How to write an academic paper link
- Sheela et al. 2016: Scientific Writing Made Easy (see introduction)
- Sovacool et al. 2018: Promoting novelty, rigor, and style in energy social science (see Table 10 "Key structural ingredients of good and bad papers")
- Walliman, N. (2010): *Research methods: the basics.* London: Routledge. (link)
- Booth, W.C., Colomb, G.G. and Williams, J.M. (2008): *The craft of research*. Chicago: University of Chicago Press. (link)

- Huss, J. (2014): *Schreiben und Präsentieren in den angewandten Naturwissenschaften*. Remagen-Oberwinter: Verlag Kessel. (In German) (link)

4.7. What to do and not to do - good scientific practice

Ethical guidelines

In research looking at social phenomena and collecting data about people it is required that you adhere to the national and EU regulations about privacy and personal information. There are also ethical guidelines by the research community that have to be followed by anyone conducting research in the name of University of Freiburg. When you for example conduct an interview study you need to inform the informants about their rights in relation to the study and how you will treat their data. In order to know if you particular study and the information that you collect fall under sensitive data for example you need to read the regulations and guidelines carefully.

The regulations for good scientific practice at the University of Freiburg you find here:

- https://uni-freiburg.de/forschung/redlichkeit-in-der-wissenschaft/
- (PDF)https://uni-freiburg.de/forschung/wp-content/uploads/sites/2/2020/10/Uni-Freiburg-Ordnung-Redlichkeit-in-der-Wissenschaft-en.pdf

And the official guidelines of the German Research Council (in German):

- https://wissenschaftliche-integritaet.de/kodex/
- https://www.dfg.de/download/pdf/foerderung/rechtliche_rahmenbedingungen/gute_wissenschaftliche_praxis/kodex_gwp.pdf
- And in English: https://wissenschaftliche-integritaet.de/en/code-of-conduct/

Other guidelines by research communities:

- Economic and Social Research Council (ESRC) Framework for research ethics: https://esrc.ukri.org/files/funding/guidance-for-applicants/esrc-framework-for-research-ethics-2015/
- Ethik-Kodex der Deutschen Gesellschaft für Soziologie (DGS) und des Berufsverbandes Deutscher Soziologinnen und Soziologen (BDS): https://soziologie.de/fileadmin/user_upload/dokumente/Ethik-Kodex_2017-06-10.pdf
- ALLEA - All European Academies - The European Code of Conduct for Research Integrity: http://www.allea.org/wp-content/uploads/2017/03/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017-1.pdf

Plagiarism

Do NOT commit the act of plagiarism in your thesis – neither deliberately nor by accident! Plagiarism is commonly defined as follows: "*The practice of taking someone else's work or ideas and passing them off as one's own*" (Oxford American Dictionary, Digital Version 1.0.1, 2005). Plagiarism is generally punished severely in academic institutions and also at the Chair of Forest and Environmental Policy. Students being caught in plagiarism not only fail the thesis assignment but also harm their own reputation.

At the Chair of Forest and Environmental policy we do sample texts for plagiarism using any of the readily available softwares.

According to the 'MCC Guide to Writing Research Papers' (Revised version August 2006, Monroe Community College), "work can be labeled plagiarized if one of the following occurs:

a) A passage is copied word-for-word (or, in music, note-for-note, or, in art, line-by-line) from someone else's work, whether the source is printed, recorded, visual, or electronic, and that source is not given credit in the required ways.

b) A passage paraphrases a source (rewards or restates the content and ideas without using the author's words) without giving credit to the source in the required ways.

c) The work is based on sources but does not give credit to any of them.

d) The work closely follows the organization of ideas or concepts in someone else's work without giving credit to that source.

e) The work has been composed, wholly or in part, by someone other than the person who submits it. This includes collaborative efforts: if a project was generated by several people, all of them must be given credit.

f) The work is "patched together" from one or more electronic sources, none of which are credited. These sources may be downloaded or printed out, or purchased wholly from a "research paper retailer."

5. Quality of scientific work & grading of theses

5.1. What characterizes an excellent thesis and great scientific work?

There exists broad agreement on major scientific standards. These scientific standards also have to be applied and to be demonstrated by the student in her/his thesis:

- The master thesis must be theory-based. Theoretical elaborations are however not a requirement for bachelor theses, but it is beneficial to include, or at least consider, the theoretical grounds whereupon the BSc thesis is based. Theories can be understood as explanation systems for observable phenomena in the real world. The student's departure in enlightening real-world phenomena has to be taken from existing theoretical literature. The student is furthermore expected to discuss and to reflect his or her findings against the existing theoretical and empirical literature. Theoretical literature claims to contain explanation systems for real-world phenomena, whereas empirical literature is characterized by a descriptive focus on specific cases and situations.

- The thesis must be verifiable. This is only possible if a clear line of argumentation based on the existing theoretical and empirical literature is given, and the underlying assumptions are made explicit. Ideally, also the original data should be included in the work (usually as an appendix) to allow the reader to verify the conclusions drawn. In our understanding science is always at least partially subjective, as science in itself is a social activity carried out by social beings. Scientific objectivity thereby does not result out of a fictive unconditional assumption, but out of the clear exemplification and reflection of the conditions and assumptions underlying the research process.

However, scientific objectivity results from applying systematic methods and is considered to be a major goal of your thesis. Clarifying your theoretical lens(es) and your methodology in an adequate way in your thesis demonstrates your scientific approach and thus your boundary scientific objectivity.

- The thesis must be in principle <u>replicable</u>. It should (at least in principle) be possible to repeat the empirical part and arrive at similar results and conclusions. This is only possible if the methods for data collection and for data analysis are clearly described, and if the work process is as unbiased and reflective as possible.

5.2. Grading

The final grade awarded your thesis is the average of the two grades awarded by the two examiners (the supervisors). The grading will be based on the standard grading scale at the University of Freiburg ranging from 1 (excellent) to 5 (insufficient). To pass, the thesis must be graded as sufficient (4.0) or better (<4.0).

The grading considers the final thesis report. There are a number of assessment criteria that are taken into consideration in the grading of your thesis. Both the content and the format of your thesis will be assessed. The golden thread and **overall line of argumentation** between the different parts of the thesis is also very important. Therefore, it is important to not only look at the different parts but to see the entire product – the thesis – and make sure that you refer back to the problem statement and theory etc. when writing the discussion and conclusion.

Below you find a list of general assessment criteria that your examiners will address in their grading. We encourage you to assess your thesis based on the criteria below by yourself. It is a great way to learn and can help you improve your thesis and final grade!

Please observe that individual examiners might have other criteria in mind when grading. You can always ask your supervisor/examiner what they consider to be most important for an excellent thesis!

**Content**	
Part of thesis	**Assessment criteria**
Abstract	Is the abstract communicating the main points (e.g. problem statement, research aim, methods, findings, and conclusions) of the thesis in a good way?
Problem statement	Is the research well-motivated? Does the argumentation for the study hold?
Research aim and questions	Is the research aim and questions feasible, interesting, relevant and ethical?
Background	As part of your introduction or a special background section it is important to provide the reader with a thorough description of the problem under investigation, the case and the study context. You need to reference central literature covering the same phenomena as you are studying. Have you included all the key literature on the subject? Is there enough information for a

	person that is not familiar with the subject to understand the problem under investigation, the case and the study context?
Theoretical & Conceptual Framework	Do you show a good understanding of the underlying concepts? Do you reference the key sources? Do you put together a coherent description of the theory and phenomena under study?
Methods	Your methodology has to fit your chosen theory and should be able to give you measurable data. You need to describe your methods (data collection and analysis) in great detail so that someone wanting to replicate your study should be able to follow the directions in the methodological chapter. From the writings in your report, could someone replicate your study and have a fair chance to come to the same results and conclusions?
Results	Are the results described in such a way that they provide a good foundation for answering your research questions and drawing conclusions? The results section should state the findings of the research arranged in a logical sequence without bias or interpretation.
Discussion	This is the section where you need to answer your research questions explicitly and discuss your results in the light of chosen theory and other literature on the topic. This is where you tie up all the loose ends and wrap everything up - making it a neat, round product. How do your results relate to other research and studies in the field? Did you prove or disprove the theory used? Can you complement the theory used? What are the limitations and possible biases of your research?
Conclusions	The conclusion shouldn't be a mere summary of the results, but should bring it all together into one final message. Are the main findings well synthesized and do they in a very concise manner describe why the research matters? to the practice and to the scientific community?

Format

Part of thesis	Assessment criteria
Literature	Do you include the main/key literature on the topic?
Style and Language	Here is where your writing is assessed. Is the writing understandable and clear? Does the reader have to reread it many times in order to understand what you want to say? Do you repeat the same words and sentence structures over and over or is there variation in the language? Are the sentences very long and complicated?
Referencing	Are all the references in the text and in the reference-list written in the same way and according to the same guidelines? – no matter which reference framework you use – Harvard, APA, etc. – you should implement it coherently throughout the thesis!
Tables and Figures	Are the tables and figures supporting the interpretation of the research? Do you refer to them in the text or are they standing on their own? There is no point in having tables and figures if

	they do not add anything to the rest of the thesis so they should be referenced to in the text as well.
Layout	Is the formatting of the thesis aesthetically pleasing to the eye? Or does the reader have to make an extensive effort to understand what is headline and sub-headline, etc.?

6.   Further readings & resources

With the following lists we do not intend to provide a complete nor exhaustive overview on helpful and interesting further readings and tools when starting to write a thesis. The lists mainly focus on basic resources and standard publications which are easily accessible at the libraries in Freiburg and from which you can start to search for more detailed literature relevant for your specific topic. References in **bold** are especially recommended.

6.1.   Introductions to the social sciences

- **Flick, U. (2015): *Introducing Research Methodology: a beginner's guide to doing a research project*. 2nd ed. London: SAGE.** *(required for the Research Skills module)*

- Fuller, S. (1997): *Science*. Buckingham: Open University Press, p. 159.
- Hollis, M. (1994): *The philosophy of social science: an introduction.* Cambridge: Cambridge University Press, p. 268. doi: 10.1017/CCOL0521447801
  Accessible at UB Freiburg: kid:803948689
- Luker, K. (2008): *Salsa dancing into the social sciences: Research in an Age of Info-Glut*. Cambridge, MA: Harvard University Press.
  Accessible at UB Freiburg: kid:1655680978
- Münch, S. (2016): *Interpretative Policy-Analyse: Eine Einführung*. Wiesbaden: Springer VS. doi: 10.1007/978-3-658-03757-4 (In German)
  Accessible at UB Freiburg: kid:1653747633
- Stevenson, L. and Byerly, H. (2000): *The many faces of science: an introduction to scientists, values, and society.* New York: Routledge. doi: 10.4324/9780429496295
- Trigg, R. (1985): *Understanding social science: a philosophical introduction to the social sciences*. Oxford: Blackwell, p. 224.

6.2.   Methodology and methods in the social sciences

- **Blaikie, N. and Priest, J. (2010, 2018): *Designing Social Research: The Logic of Anticipation*. 2nd/3rd ed. Cambridge: Polity Press.**
  Accessible at UB Freiburg: kid:608577995
- **Bryman, A. and Cramer, D. (2001): *Quantitative data analysis with SPSS Release 10 for Windows – a guide for social scientists.* Hove: Routledge. doi: 10.4324/9780203498187**
- **Creswell, J.W. (2005): *Educational research. Planning, conducting, and evaluating quantitative and qualitative research*. 2nd ed. Upper Saddle River, NJ: Pearson.**
  Accessible at UB Freiburg: kid:379868830
- **Walliman, N. (2010): *Research methods: The basics*. London: Routledge. doi: 10.4324/9780203836071**
  Accessible at UB Freiburg: kid:627632718

- **Yin, R.K. (2003): Case study research: Design and methods. 3rd ed. Thousand Oaks, CA: SAGE. doi: 10.1046/j.1365-2648.2003.02790_1.x**
  Accessible at UB Freiburg: kid:1607218461

- Aron, A. and Aron, E. (2007): *Statistics for the behavioral and social sciences.* Upper Saddle River, NJ: Prentice Hall.
- Atteslander, P. and Cromm, J. (2010): *Methoden der empirischen Sozialforschung*. 13th ed. Berlin: Erich Schmidt. (ESVbasics) (In German)
  Accessible at UB Freiburg: kid:1605054631
- Baur, N. and Blasius, J. (2019): *Handbuch Methoden der empirischen Sozialforschung*. 2nd ed. Wiesbaden: Springer VS. doi: 10.1007/978-3-658-21308-4 (In German)
  Accessible at UB Freiburg: kid:106736658X
- Bohrnstedt, G.W. and Knoke, D. (1982, 1994): *Statistics for social data analysis*. 2nd/3rd ed. Itasca: Peacock, p. 574.
  Accessible at UB Freiburg: kid:1650942621
- Booth, W., Colomb, G.G. and Williams, J.M. (2003): *The craft of research*. 2nd ed. Chicago, IL: The University of Chicago Press.
  Accessible at UB Freiburg: kid:682767956
- Cohen, B.H. and Lea, R.B. (2003): *Essentials of Statistics for the Social and Behavioral Sciences*. New York: John Wiley.
- Cohen, L. and Holliday, M. (1998): *Practical statistics for students.* London: Paul Chapman.
  Accessible at UB Freiburg: kid:223214949
- Dale, A. and Davies, R.B. (1994): *Analyzing social and political change - a casebook of methods*. London: SAGE, p. 229.
- Denzin, N.K. and Lincoln, Y.S. (2018): *Sage handbook of qualitative research*. 5rd ed. Thousand Oaks, CA: SAGE.
  Accessible at UB Freiburg: kid:876237073
- Diekmann, A. (2017): *Empirische Sozialforschung. Grundlagen, Methoden, Anwendung*. 17th ed. Hamburg: Rowohlt. (In German)
- Döring, N. and Bortz, J. (2016): *Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften*. 5th ed. Wiesbaden: Springer VS. doi: 10.1007/978-3-642-41089-5 (In German)
  Accessible at UB Freiburg: kid:1653711817
- Dunn-Rankin, P., Knezek, G.A., Wallace, S. and Zhang, S. (2004): *Scaling methods*. 2nd ed. Mahwah, NJ: Lawrence Erlbaum Associates.
  Accessible at UB Freiburg: kid:1687124434
- Field, A., Miles, J. and Field, Z. (2012): *Discovering statistics using R*. London: SAGE.
  Accessible at UB Freiburg: kid:68436977X
- Flick, U. (2018): *An Introduction to Qualitative Research*. 6th ed. London: SAGE.
- Gläser, J. (2010): *Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen*. 4th ed. Wiesbaden: Springer VS. (In German)
  Accessible at UB Freiburg: kid:1602928118

- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1995): *Multivariate data analysis with readings*. 4th ed. London: Prentice Hall, p. 730.
  Accessible at UB Freiburg: kid:1645830543
- Hajer, M. (2004): Argumentative Diskursanalyse. Auf der Suche nach Koalitionen, Praktiken und Bedeutung. In: Keller, R., Hierseland, A., Schneider, W. and Viehöver, W. (ed.): *Handbuch Sozialwissenschaftliche Diskursanalyse*. 2nd ed. Wiesbaden: Springer VS, pp. 271-298.
- Keller, R. (2011): *Diskursforschung. Eine Einführung für SozialwissenschaftlerInnen*. 4th ed. Wiesbaden: VS Springer.
  Accessible at UB Freiburg: kid:1604827130
- Lune, H. and Berg, B.L. (2017): *Qualitative research methods for the social sciences*. 9th ed. Harlow: Pearson.
  Accessible at UB Freiburg: kid:162351603X
- Myers, J.L. and Well, A.D. (2003): *Research design and statistical analysis*. 2nd ed. Mahwah, NJ: Lawrence Erlbaum Associates.
  Accessible at UB Freiburg: kid:1603572953
- Nair, P.K.R. (2005): How (not) to write research papers in agroforestry. In: *Agroforestry Systems*, Vol. 64, v-xvi. doi: 10.1007/s10457-004-7592-y
- Punch, K.F. (2000): Developing effective research proposals. London: SAGE, p. 125.
- Shadish, W. R., Cook, T. D. and Campbell, D. T. (2002): *Experimental and quasi-experimental designs for generalized causal inference*. Houghton: Mifflin Boston.
- Sirkin, R. M. (1995,2005): *Statistics for the social sciences*. 2nd/3rd ed. Thousand Oaks, CA: SAGE.
  Accessible at UB Freiburg: kid:1628572639
- Vaccaro, I., Smith, E. A. and Aswani, S. (2010): *Environmental Social Sciences: Methods and Research Design*. Cambridge: Cambridge University Press.
  Accessible at UB Freiburg: kid:630713294

One way to strengthen your general methodological competences and learn specific methods is to complete an online course in research methodology and methods offered on one of several MOOC (massive open online course) platforms.

MOOC providers:

- Coursera: https://www.coursera.com (see, for example, several methodology courses offered by the University of Amsterdam instructors: https://www.coursera.org/learn/quantitative-methods)
- edX: https://www.edx.org

6.3. Resources at your disposal
- R for Statistical Computing (http://www.r-project.org/), freeware
- SPSS, statistical data analysis package (www.spss.com), available at a special rate to the University of Freiburg students and staff; see the University of Freiburg IT support webpage:

https://www.rz.uni-freiburg.de/services-en/beschaffung-em/software-en/statistiksoftware-en?set_language=en

- MaxQDA (http://www.maxqda.com/) for the analysis of qualitative text data,
- Atlas.ti (http://atlasti.com/) for the analysis of qualitative text data.
- AQUAD (http://www.aquad.de) freeware for the analysis of qualitative data.
- NVivo (www.qsrinternational.com) for in-depth analysis of text-based data.
- WinGen (http://www.umass.edu/remp/software/simcata/wingen/) for generating IRT parameters and item responses.
- LISREL (http://www.ssicentral.com/) for structural equation modelling.
- HLM (http://www.ssicentral.com/) for analysis of hierarchical data.
- TEXnicCenter (http://www.toolscenter.org/) for developing LaTex documents.

6.4. Additional support & professional counseling

It is not uncommon to feel additional stress and anxiety when writing your thesis as it is independent work that can be experienced as both lonely and less structured than what you are used to from your previous studies. The master thesis is also the last step for many students before entering professional life and finding a job. Dealing with high stress levels, processes of upheaval, difficult decision-making, personal changes, and an overall complex personal situation can be helped if you receive professional support and counseling. Different institutions offer services, incl. professional counseling to support students at the University of Freiburg during their studies. SWFR (Studentenwerk Freiburg) offers seminars and workshops that teaches you how to better manage stress and anxiety. We encourage you to make use of these services if you feel the need for additional support beyond the task of writing the thesis. If needed, you should try to openly communicate possible delays to your supervisor. Here below you find the contact information to two different services offering counseling to students at Uni Freiburg.

The Central Academic Advising Office (LINK) is located at the **Student Service Center**, Sedanstraße 6 (roughly a three-minute walk from Freiburg's main train station):
Student Service Center info hotline: +49 (0)761 203 4246
Monday to Thursday: 9 a.m. to 4:30 p.m.; Friday: 9 a.m. to 12 noon
studienberatung@service.uni-freiburg.de

SWFR's (Studentenwerk Freiburg) Psychotherapeutic Counselling Centre (LINK)
To arrange a consultation, please call +49761 2101 269 or send an email to r.meyer@swfr.de.
During open consultation hours, you can call for a short consultation of about 10 minutes to clarify the further procedure. This is always Wednesdays from 13.00 to 14.00 o'clock.

7. Final advice

Without any doubt, it is going to be difficult at times, but just as you eat an elephant, you get through it - bit by bit. And, before you know it, you will be done.
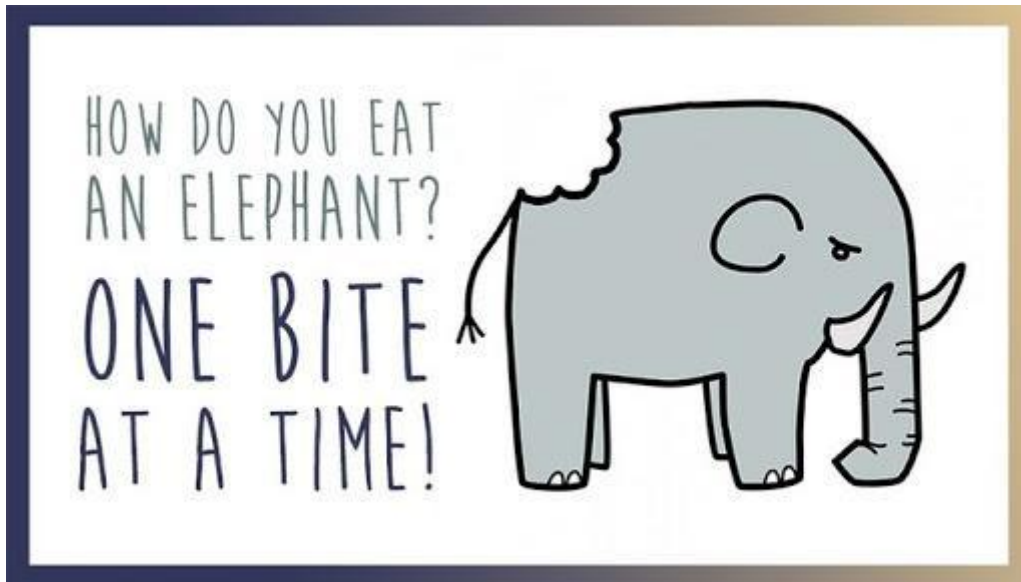
We wish you the best of luck with your thesis project!

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