

WRITING A BACHELOR THESIS (B.Sc.) AT THE ENDOWED CHAIR OF PROCUREMENT

– Information for Students –

PURPOSE OF THIS DOCUMENT

These guidelines shall help to structure the process of writing a Bachelor Thesis and to avoid common mistakes. However, this document should not be regarded as an exhaustive presentation.

REQUIREMENTS AND EXPECTATIONS

The bachelor thesis constitutes an important element of the Bachelor of Science program. It represents an **independent piece of scholarly work**, which testifies not only the student's knowledge of the foundations, structures, and methodologies underlying a given topic, but also the ability to approach and structure a problem independently. Our expectation is that a bachelor thesis makes an original contribution to knowledge.

MANAGING THE PROCESS

- Most importantly, do not wait until the last minute. Last-minute efforts read like last-minute efforts! Plan backward from the date the bachelor thesis is due. A good thesis requires careful preparation, research, critical thinking, writing, and review. These steps take time. Also, allow some slack for the unexpected.
- During the first week, familiarize yourself with the assigned topic and create an outline of the thesis. Present the outline to your supervisor. Block the last week for polishing and proof reading.
- Always keep in mind: A bachelor thesis is an **independent** piece of work! Therefore, **we expect you to work independently and show initiative, leadership, and creativity** in the sense that you **tackle upcoming questions and problems yourself, before contacting your supervisor**. You may plan up to **three face-to-face-meetings** with your supervisor. The supervisor's role is to guide you through your thesis (e.g., hint at important literatures, give possible directions, suggest ways out of dead ends), but the actual work has to be done by you. You may get stuck, of course and, **after exhausting your possibilities**, you are always welcome to solicit help.
- Prepare for the scheduled meetings with your supervisor **upfront**. The more specific the questions are, the more elaborated the feedback will be. A preparation can be a detailed agenda, slides describing your problem, or a list of questions. **Send this material to your supervisor prior to the actual meeting.**

DOING THE RESEARCH

Good research is the foundation of your bachelor thesis. Clearly formulate the objectives of your thesis! It stands to reason that without a solid foundation, the bachelor thesis you write will inevitably be weak. Research relies on knowledge compiled by and analyses done by others. If you write a bachelor thesis without consulting the literature, then you have written an essay, not a research report. As a general rule, your bachelor thesis will be stronger if you use a good variety of the most important, most up-to-date, and most specific resources.

Start out by reading the references provided by your supervisor and/or a few general studies on your topic – yet, this provides merely the launching pad for your research. The idea is to get a grasp of your topic quickly and to gain the ability to identify what is important and on what you need to focus.

Libraries and online-sources contain many types of resources that you can utilize to do your research. The following list is a mere beginning:

- *Books*. Some books are fundamental to the procurement and supply chain field, and at least touch upon the topics assigned for the bachelor theses.
- *Articles in scholarly journals*. Scholarly journals can deal with certain topics in much greater detail than (reference) books can do. Also, you must consult scholarly journals because scholars may have found new information or conducted new analyses.
- *Articles in practitioner journals*. Practitioner journals may touch upon certain up-to-date topics. For some contemporary topics, books are not yet available. In such cases, practitioner journals are more likely sources of information and analysis. You may consult practitioner journals even for non-contemporary topics because they are a valuable source of examples and case studies to be integrated in the bachelor thesis.
- *Newsmagazines and newspapers*. If you are covering a current topic or need to have a day-by-day account of events and cannot find one elsewhere, you may also turn to newsmagazines and newspapers. Be sure, however, to check with your supervisor to ensure that these are considered acceptable sources for your assignment. Mostly they are useful for facts or for contemporary quotes and are usually not good sources of analysis.

WRITING THE BACHELOR THESIS

(1) Structure and content

The document should consist of the following:

- *Title page* should contain the following information “University of Mannheim”, “Endowed Chair of Procurement”, “Prof. Dr. Christoph Bode”, “Bachelor’s Thesis (B.Sc.)”, [Title of Thesis], [Name], [Address], [Student ID number], [Supervisor], [Due date].
- *Table of contents*: Shows the structure of the thesis.
- *List of abbreviations*: Lists all abbreviations used except for commonly known ones.
- *List of tables (optional)*: Lists all tables of the thesis with number and caption.
- *List of figures (optional)*: List all figures in the thesis with number and caption.
- *Text*: From introduction to conclusion (see below).
- *List of references*: Reports all references cited in your thesis, including (but not limited to) (peer-reviewed) journal articles, book chapters, books, newspaper articles, web pages. Has to follow a specific reference style (see below).
- *Appendix (optional)*: Very detailed but relevant information should be placed in the appendix, such as data collection instruments, detailed analyses, programming source code, or detailed descriptions. All appendices should be referred to in the thesis. If there is more than one appendix, they should be identified as A, B, etc. (optional).
- *Signed affirmation/ Eidesstattliche Erklärung (in German)*: The template can be found in the current version of the examination regulations for your course of studies.

The thesis should comprise 20 pages including figures and tables. Cover sheet, lists and appendix are not counted. Exceeding or falling short by more than 10% is not permitted and can lead to a mark deduction. Only additional information that is not absolutely necessary for a general understanding of the work may be placed in the appendix.

More specifically, the main body of the bachelor thesis should have:

- An *introduction*, which is the key to letting your reader know where you are headed and what you will accomplish. The introduction should be compact and focus on introducing your research in an exciting way for the reader. Motivate and develop your research question(s) so that a reader becomes interested in your thesis. Remember always that while the organization of your bachelor thesis may be clear to you, it is not clear to your reader. Therefore, the introduction must provide an overview of how the research question will be addressed. It is something like a road map that acquaints the reader with the journey ahead. Tell the reader in concise terms what the subject of the bachelor thesis is and why it is relevant. State the objectives or research question(s) of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results. All questions raised in the introduction are to be answered within the thesis and evaluated in the discussion.
- A *main part*, which represents the largest part of the bachelor thesis. The structure depends on the research question(s) at hand and the chosen research design. In any case, however, it must follow a logical organization. To this end, divide the main part into sections and subsections with appropriate headings. Do not assume too much special knowledge on the part of the reader and include all important information, explain its significance, and detail your logic. Your supervisor wants to know what you know and will not necessarily “read into” the bachelor thesis information that is not there.

For the literature review, explain the current state-of-the art in the respective field of study, present relevant theories and concepts, identify streams and trends in the literature, and add your own reasoning by making comparisons and evaluations. Examples are important to illustrate abstract concepts. Make sure that you dig sufficiently deep into what we already know. Often times, literature reviews are too shallow and fail to adequately structure and reflect the state of the field.

For tasks that go beyond the literature review (e.g., building a theoretical framework), familiarize the reader with the applied theoretical concepts regarding the subject under scrutiny and the chosen methodology. Develop your own framework by capitalizing on the previously explained concepts. Then use the framework to answer your previously defined research question(s).

- A *conclusion and implications* section, which sums up what you have found and stresses the evidence that supports your analysis. There is something very human about wanting to have things summed up, so do not leave your reader hanging without a conclusion. Discuss the limitations of your work, highlight implications for research and practice, and provide an outlook on future research opportunities.

(2) Style

Besides structure, the other hallmark of a good bachelor thesis is clarity in writing. It is important to realize that your report will be judged in part by such aspects as logical and consistent flow of argumentation, grammar, and wording. In the following you will find some essential style considerations:

- *Watch your sentence structure.* Students and scholars too often seem to assume that long, complex sentences are symbolic of profundity. They are not; they are mostly just cumbersome. Simple, subject-verb-object sentences are best. They are powerful. Still, if you do not vary them occasionally, numerous short sentences do not “read” well. So, after several simple sentences, add a longer one. However, do not go too far. Consider “Rourke’s Rule of 2s”: “Sentences more than two lines long or with more than two commas are probably too long to be understood easily, especially if there are two in a row.”
- *Use Standard English.* Colloquial English typically does not make a good impression unless you are writing fiction.

- *Watch your paragraph length.* Paragraphs over one page in length are usually too long. They may contain redundant statements or more than one major idea. Rework such paragraphs to streamline and condense the content or to separate ideas into additional paragraphs. At the other extreme, one-sentence paragraphs are not acceptable. Remember that each paragraph should have a lead-in and several sentences that detail or develop an idea.
- *Get to the point.* Avoid verbiage, buzzwords, inflated rhetoric, and do not overdo it with salesmanship and bombast.

Your bachelor thesis must be free of common writing mistakes. Cautions about some of these are:

- *Avoid sentence fragments.* Every sentence must have a subject and a verb.
- *Check your spelling.* Misspelled words make you appear uneducated, careless, or both. Keep in mind that misspelled words and typographical errors cannot be distinguished from each other by a reader. Both are unacceptable. Use a dictionary, the “spell check” program on your computer, and a second reader to proofread your drafts. For English-language theses, either the British or the American spelling must be followed consistently - no mixture of the different spellings.
- *Know when and how to use specific punctuation.* Consult dictionaries and style manuals on the proper usage of commas, colons, semicolons, parentheses, brackets, and the like.
- *Make sure subjects and verbs agree.* Subject-verb disagreement is most likely to occur when the two are separated in the sentences by several other words.
- *Be careful of verb tense.* Many poor writers use only present tense. Use past tense, future, and other tenses as appropriate. Also be careful to keep verb tense consistent within paragraphs. For the literature review, past tense is usually the preferred tense, e.g., “Williamson (1975, p. 255) defined opportunism as ‘self-interest seeking with guile’.”
- *Avoid the use of contractions.* Contractions like “can’t”, “won’t”, or “don’t” are inappropriate for a formal text.
- *Be careful of abbreviations.* In operations management, a large number of abbreviations is used. Do not expect the reader to be familiar with them. The first time you use an abbreviation, provide the term followed by the abbreviation in parentheses, e.g., transaction cost economics (TCE).

(3) Format

A well-formatted and stringent layout emphasizes your research findings – and is part of the evaluation. Therefore, pay attention to a professional appearance of your thesis.

- *General layout.* Print only on one side of a page. Use Calibri as font with a 11pt size and a line spacing of 1.5. In footnotes use the same font with a 10pt size and single line spacing. Set your page to full justification with hyphenation. The top and right margin are 2.5 cm, the left margin is 3.5 cm (for binding). The bottom margin is 2cm. Page numbering is on the bottom of the page.
- *Numbered sections.* As described above, divide your thesis into clearly defined and numbered sections. Subsections should be numbered using Arabic numerals 1.1 (then 1.1.1, 1.1.2, etc.), 1.2, etc. Each heading should appear on its own separate line. And please remember: If there is a 2.1.1 then there should also be a 2.1.2. Use the numbering also for internal cross-referencing. Roman numerals for list of contents, abbreviations, tables, bibliography and appendix.
- *Footnotes.* Footnotes should be used sparingly! Number (again Arabic) them consecutively throughout the thesis.
- *Figures.* All figures should be numbered (Arabic) according to their sequence in the text and **must** be referenced in the main body of the thesis. Within the figures, use a sans-serif font (e.g., Arial or Helvetica). If you have not developed a figure on your own, mention the source using an appropriate citation. Please try to avoid bitmap graphics (pixels) where possible and use vector graphics instead.

- *Tables.* Tables have to be integrated as editable text and not as images, and consecutively numbered in accordance with their appearance in the text. Again, every table has to be referenced in the text. Table notes have to be placed below the table body.

(4) Citations and references

In research, you always build on the previous work of others (“dwarfs standing on the shoulder of giants”), which has to be cited. There are two reasons why citations are mandatory. The first is to allow the reader to explore the subject further by consulting the works that you have used. Second, intellectual honesty requires citations. Failure to use them is plagiarism, which is unacceptable in any form. Plagiarism is the theft of the thoughts, facts, sentences / text blocks, or knowledge of others by not giving them proper credit. Follow these guidelines to protect yourself:

- Anytime you quote or paraphrase (i.e., putting it in your own words) the thoughts or work of others, cite the source. It is incorrect to believe that only quotations require citations. You should also insert a note whenever you are relying on someone else’s thoughts or research, even if you are only paraphrasing. Direct quotations should be used extremely sparingly; it is preferable to incorporate the idea into your own formulation. Only in the case of particularly concise formulations or fundamental statements is a literal reproduction of facts appropriate.
- Simple, commonly known facts need not be cited. A rule of thumb is that if you did not know the information before you started the bachelor thesis, then you should use a citation to show where you found the information. Also, even if you know something when you start, you should cite the source of any controversial “fact”.
- The most important rule is: When in doubt, cite the source. Plagiarism is unethical and bears serious risks: Grades, reputations, and academic careers have been ruined by plagiarism. Manage these risks by erring on the side of safety. One citation too many is far better than one citation too few. Please note that your supervisor will take the issue of plagiarism very seriously!

The use of correct formats for citations – in-text and in the list of references – often seems complex and cumbersome. However, the advantages of following a consistent format are completeness and consistency. Preferably, the formal style of a bachelor thesis should follow the **APA guidelines**. For more details, see:

American Psychological Association (2010). *Publication Manual of the American Psychological Association*, 6th ed., Washington, DC: American Psychological Association.

Please ensure that every reference cited in the text is also present in the list of references (and vice versa). The list of references should be organized alphabetically; there should be no separation into monographs, articles, etc. The required information on the various text sources and the conventions for citing a source can be found in the literature on academic writing. Strict attention must be paid to consistency with the citation style in the text.

COMPLETION

At or before the fixed deadline, you have to submit **two hard copies** (with appropriate binding, e.g., metal or plastic spiral binding; we do not need leather binding with gilt edged pages) and **soft copies**, including **source files** (MS Word or Latex) and a **PDF** file, of the bachelor thesis. The grade will be based on these documents.