

# Guidelines for writing scientific papers

Department of Management

# Freie Universität Berlin

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## 1 GENERAL INFORMATION

In a scientific paper, you systematically and purposefully answer a specific question to make a *new* contribution to current research. In your work, you need to discuss the issue in a *comprehensible* and *transparent* way and *substantiate* and *justify* your decisions.

The purpose of these guidelines is to support you in the process of writing a scientific paper and inform you about the criteria used to evaluate your work. Your study and examination regulations remain unaffected.

#### 1.1 Seminar theses

A seminar thesis is written either individually or in small groups of students. If the seminar paper is written by more than one student, authorship of the individual parts *may* have to be indicated in the header of each page. Your supervisor will inform you about the specific regulations.

With a seminar thesis, students can gain 6 ECTS.

In the *Bachelor's program*, the length of a seminar thesis is 10-15 pages per student (including footnotes; excluding cover page, table of contents, list of figures and tables, bibliography, and, if applicable, appendix).

In the *Master's program*, a seminar thesis should encompass approximately 15 pages (5,000 words) per student (including footnotes; excluding cover page, table of contents, list of figures and tables, bibliography, and, if applicable, appendix).

#### **1.2 Bachelor's and Master's theses**

You can find detailed information on the requirements, word count, working period and submission of your thesis in your current study and examination regulations:

- Bachelor: §10 Studien- und Prüfungsordnung für den Bachelorstudiengang Betriebswirtschaftslehre des Fachbereichs Wirtschaftswissenschaft der Freien Universität Berlin
- Master: §9 Prüfungsordnung für den Masterstudiengang Management & Marketing des Fachbereichs Wirtschaftswissenschaft der Freien Universität Berlin

## Overview of the regulations: (as of November 2024)

	Bachelor's thesis	Master's thesis
Requirements:	90 ECTS acquired in the Bachelor's program	60 ECTS acquired in the Master's program
Credit Points:	12 ECTS (360 hours)	24 ECTS (720 hours)
Word count:	approx. 9.000 words (including footnotes; excluding cover page, table of contents, list of figures and tables, bibliography, and, if applicable, appendix)	approx. 16.000 words (including footnotes and bibliography; excluding cover page, table of contents, list of figures and tables, appendix, if applicable)
Period:	12 weeks	22 weeks
Submission (at the Examination Office):	Electronic copy via E-Mail	Electronic copy via E-Mail

The thesis can be written in either German or English language.

There are different types of scientific work, from which you will choose one together with your supervisor, e.g.:

## • Empirical work:

Analysis of self-collected data (e.g. interviews, observations, experimental studies or similar) or existing data (secondary data analysis). Bachelor's and Master's theses are usually empirical works with either a qualitative or quantitative research design.

## • Literature analysis:

A comprehensive overview of theoretical approaches, models, and related empirical results. Existing theories should be integrated, refined, and further developed.

## • Practical work:

You can also work on your thesis together with external partners (e.g. a company). In this case, your supervisor will discuss the procedure and specific requirements in detail with you. In general, the scientific aspect will have to be prioritized over the interests of the cooperating partner.

## 2 LITERATURE SEARCH

## 2.1 Preparation

Before you focus on a specific topic, make sure to inform yourself about the requirements of the thesis. For potential topic areas and the type of supervision check the website of the respective department.

In addition to these guidelines, you can find an <u>online course on Blackboard</u> that provides you with more information about scientific work and writing.

## 2.2 Orientation

First, familiarize yourself with the context of your topic. This allows you to get an overview, specify your research question, and develop search strategies for further research, e.g. by selecting promising journals. A first draft of a structure can help you organize your thoughts.

## 2.3 Systematic search

Following a broad scan of your topic field, you can dive into the literature related to your question in a more systematic way. Do not underestimate the time needed for this – the literature is an important basis for your work!

Ask yourself the following questions:

- What is the current state of research on your topic?
- What is currently being discussed?
- What ideas or solutions already exist?

## Selection of literature

When evaluating sources, keep in mind the following aspects:

- What contribution does the source make to your topic and research question?
- Which methods were used and how were the results interpreted?
- What should be critically considered (possible gaps, limited generalizability, contradictory results etc.)?
- Which references does the author use? Essential articles often cite other valuable sources.

Make sure to only use **reputable** and – if applicable – **up-to-date** sources. What literature is appropriate for your thesis depends strongly on its topic. In many cases, we recommend first consulting English-language top journals, which you can access via the <u>FU Berlin databases</u> (e.g. <u>EBSCOhost</u> or <u>FU.Primo</u>). Use keywords or keyword combinations that clearly refer to your specific topic. German sources from reputable scientific journals, books or book chapters may also be suitable for your topic. For the quality of your literature research, it is particularly important that you include the "state of the art" in your work, i.e. the latest research from the most important experts in the field. Generally, you should always prefer higher quality sources (e.g. those with a higher journal ranking, see below, or books from established scientific publishers) to those of lower quality.

To access scientific databases and articles in full text (PDF) from home, you need a VPN client on your PC. You can download this client from the Zedat website. Once the VPN client is installed, you can continue your research in academic databases. Please note that Wikipedia or similar internet sources are not suitable as sources for any scientific work. They can only help you to get a first impression of your topic.

You can identify top journals using the <u>Journal Quality List</u>. Particularly, we recommend focussing on top journals from:

- Financial Times 50 Ranking
- British Association of Business Schools (ABS) Ranking
- Verband der Hochschullehrer für Betriebswirtschaft Journal Ranking

## Documentation of research

Remember to make notes on your sources, e.g. the database used, date of access, keywords and other filter criteria (i.e. time range, type of publication, etc.), to avoid subsequent additional work. It is highly recommended to use a literature management program such as <u>Zotero</u>, <u>EndNote</u> or <u>Citavi</u>, which will make the citation process easier to manage.

We would like to especially draw your attention to a <u>variety of courses</u> offered by The Library at the School of Business & Economics on the methods of scientific work.

## 3 STRUCTURE

Your paper should be structured in a way that there is a logical flow of thought from the introduction to the conclusion.

The individual parts indicate which aspects are relevant for your question and how they relate to one another. Therefore, pay attention to meaningful headings and and a clear connection between main points and subpoints. If one level of your outline is to be subdivided, it must have at least two subcategories, which together fill at least one page. Try to avoid using too many levels (e.g. 1.1.1.1.1) – most of the time, no more than three levels are necessary.

The thesis structure is different for literature analyses versus empirical work (see point 1.2). Often, the following sections can be distinguished:

_			
		L	
	Literature analysis	1	Empirical work
		i	

Title Page

Please use the template provided in the appendix of the guidelines.

## Table of Contents

Shows the structure of your work.

## Lists of figures, tables, and abbreviations

(see point 7.2). Please use the sample in the appendix of the guidelines.

## Abstract

At the beginning of your thesis, there should be a short summary of the contents, also called an abstract (about 200 words). The abstract should be written in an easily understandable manner and should not include any citations.

## Introduction

Start your text with an introduction to the issue addressed in your work. To illustrate the relevance of your topic, you may use statistics, events, sayings, quotes, etc., in addition to literature sources.

Narrow down your topic and guide towards a description of the aims of your work and your research question. These must be clearly specified so that it will be possible to evaluate at the end of the thesis, whether you answered the research question and achieved the aims of your thesis with your thoughts and approaches. Explain how the question is being addressed and how it is presented in your paper (structure). Summarize your main results briefly. Try to write engagingly and spark interest!

Try to evoke the reader's interest!

#### Theoretical background

Outline the theoretical constructs and models relevant to answering your research question.

#### Analysis of literature

The literature analysis is the main part of your work! Here you describe the essential developments in the respective field and integrate them with reference to your research question.

#### Discussion and conclusion

Briefly summarize the most important results and then critically discuss them (especially potential discrepancies or "gaps" in the research; evaluate them with regard to the objectives of the paper). Propose further theoretical developments and derive practical implications.

Pick up thoughts from your introduction to ensure continuity in your thesis.

#### Theoretical background

Explain the necessary definitions of terms <u>and</u> provide a concise overview of the literature relevant to answering the research question. This chapter serves as a detailed presentation and justification of your research question or hypotheses.

## Methods

In this section, describe and justify your research design, data collection, and analysis processes.

#### <u>Results</u>

Present your results with reference to the hypotheses you have formulated or, in the case of qualitative work, to the theory. Illustrate your results with tables and/or graphs.

#### **Discussion and conclusion**

Briefly summarize your findings, provide a clear answer to your research question, and evaluate your findings in the context of the objectives of the thesis. Explain how your work contributes to research and practice. Address limitations of your own methodology and derive implications for further research and practice.

## <u>Reference list</u>

(see point 7.1)

## <u>Appendix</u>

The appendix provides additional information that is not immediately required for understanding the paper. It also includes figures and tables, as well as research instruments,

such as questionnaires, that appear too "bulky" in the text. Separate sections of the appendix should be named with "Appendix A", "Appendix B", etc.

<u>Affidavit</u>

(see point 9). Please use the template provided by the examination office.

## 4 **RESEARCH ETHICS**

If you conduct research with people (e.g., interviews or observations), you must be mindful of the issue of research ethics. In social science research, this mostly involves protecting privacy and identity, as well as obtaining the consent of participants.

In particular, this refers to:

- Data Protection and Privacy: When you collect and retain data from people, you face the challenge of using the data in your research and disclosing it while protecting the privacy and identity of the participants (interviewees, respondents).
- Informed Consent: Before a person participates in your research project, you must tell them about the objectives of your research and the associated benefits and risks. You must make it clear that their participation is voluntary and that they can refuse or stop participating at any point. After you have informed the person, you must obtain their consent to participate.

In most cases, information on research ethics is provided to participants in the form of a written information sheet. You can give your participants the information when you first approach them (e.g., in an email), or before you begin with your first interview or survey. The information sheet should include the following information:

- What this project is about (objectives)
- Who is conducting the project (your name, that you are writing a thesis at FU Berlin, who your supervisor is)
- What will be done (recorded or unrecorded interviews, surveys, focus groups)
- Where it will take place
- What kind of questions or activities there will be
- Whether there are risks or benefits for the participants
- How long the participation will take
- That the data will be kept secure

- How the results will be used, where they will be published
- Whether the results will be published anonymously or not
- That participation is voluntary and can be discontinued at any time

Especially in the case of interviews, you need to clarify with your participants whether they as an individual and/or organization agree to be recorded, and whether or not they want to remain anonymous in the publication of the results. If a participant withdraws from his or her participation, you must delete your recordings and may not use them at all. In general, you must ensure that your data is protected against access by third parties (e.g. not stored in a cloud without anonymization). You should offer all your participants to send them the results of your project.

In addition to these research ethics issues, you need to consider your own safety. Consider what risks there are to you and how to manage them. Let someone know when and where you are conducting your research, make sure you are dressed appropriately, and consider how you would handle rejections and uncomfortable situations during an interview, for example.

## 5 CITATIONS

There are several citation styles, but only one citation style should be used consistently within a paper. In the Management Department, the APA (American Psychological Association) citation style is uniformly used. All common literature management programs offer templates for the current version of this citation style (as of November 2024: APA 7th Edition). Using such a template is recommended; nevertheless, you must still manually check the automatically generated bibliography and correct it, if necessary.

**Important:** *Every* idea, whether literally quoted or only cited in a verbatim manner, that is not originally yours, is to be made apparent as such by specifying the source in the text on the one hand and by referencing the source in the reference list on the other hand. This also applies to translated texts!

Plagiarism occurs when you present words, ideas, pictures or data of another person as your own without indicating the source. Your work is then considered plagiarism, regardless of whether you acted knowingly or maliciously, carelessly or negligently. In any case, plagiarism has very serious consequences for you, which in severe cases can lead to expulsion from the university.

It is considered plagiarism if you:

- Copy words, images, or ideas from a source (book, article, internet, lecture slides...) without acknowledging the source
- Do not indicate direct quotes with quotation marks
- Paraphrase ideas and sentences from a source without crediting the source
- Reuse material from old papers (including your own seminar papers)
- Copy the work of another student
- Have another person write your paper (possibly for a fee) or buy a paper
- Cite a source in the bibliography without citing it in the text in the correct place

## 5.1 Direct citations

A direct quote must always be copied word-by-word from the original source. Each direct quote is enclosed in quotation marks, and the citation is provided either at the beginning (narrative citation) or at the end of the quote, after the closing quotation marks, in parentheses (parenthetical citation).

Omissions within a quotation are indicated by three dots [...]. Additions and amendments by the author made in the original quotation must be shown in square brackets. If you wish to emphasize words in the quote by using italics, the citation should include the note "emphasis added by the author" alongside the page number. These changes must not alter the original meaning of the quote.

## Examples:

Garg et al. (2005, p. 188) argue that "[t]he franchisor–franchisee relationship is a classic case of an agency relationship, as is the relationship between a chain's headquarters manager and a hired outlet supervisor".

"The franchisor-franchisee relationship is a classic case of an agency relationship, as is the relationship between a chain's headquarters manager and a hired outlet supervisor" (Garg et al., 2005, p. 188).

## 5.2 Indirect citations

In the case of an indirect quotation, the content is reproduced analogously. Indirect citations are not marked with quotation marks. The citation note includes the name of the *author* and the *year of publication*.

## Examples:

In their literature review, Johnson et al. (2013) demonstrated that director demographics and firm performance have shown no clear relationship.

However, director demographics and firm performance have shown no clear relationship (Johnson et al., 2013).

## 5.3 Citation in text

To cite several works by *the same author in the same year*, the corresponding year is followed with letters (a, b, c, ...).

*Example:* (Luhmann, 1999a, 1999b).

For up to *two authors*, all author names should be specified. If it is exactly two authors, they are separated by an "*and*" and by "&" in parenthetical citation.

Example: Luhmann and Kauf (1999) or (Luhmann & Kauf, 1999).

If there are *three or more authors*, only the first author is noted and the abbreviation "*et al.*" is added. This is already done when the source is mentioned for the first time.

*Example:* For an article by the authors Baschek, Bredenkamp, Öhrle and Wippich from 2001: (Baschek et al., 2001)

## 5.4 Secondary sources and internet sources

As a general rule, you should only quote works that you have read. Should you ever not be able to access the original of an essay or a book that you would like to cite, please first check thoroughly whether the citation is absolutely required to your argument. Only if this is true, can you cite it as follows. *Please note that this citation method should only be used in very few exceptional cases.* 

(Original author, 1926, cited in Secondary author, 1990, p. 10)

*Internet sources* are allowed, if they are used in a meaningful way and are not used as replacement for scientific literature. The sources are cited in the text with author name and year. The author of the website has to be determined and specified, and if no author is available, the owner / creator / host of the cited webpage is mentioned.

Example: Apple Inc. (2014).

Further information on citing in APA style:

• https://extras.apa.org/apastyle/basics-7e/#/

## 6 FIGURES AND TABLES

Figures from other sources can either be copied without changes or modified. If the latter is the case, the figure is marked with "*adapted from...*". Mark illustrations that you have created yourself with "*self-created illustration*" and cite the data sources for your illustration. If you have decided to use a figure, use a credible data basis. If you include a figure or table, address it in the text. When designing a figure, make sure they remain meaningful if converted to grayscale.

Please number all figures and tables consecutively, name them, and indicate below the figure or table exactly what source it came from and how it was modified.

#### Examples for tables and figures in text:

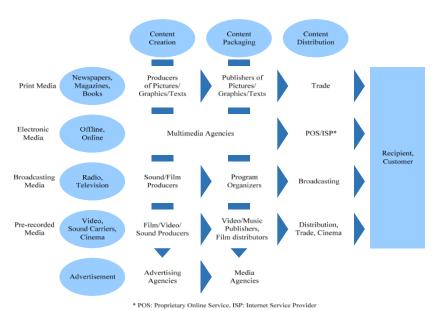


Figure 1. The value chain of media companies.

Modified figure adapted from Hacker (1999, p.162)

	1. Qrt.	2. Qrt.	3. Qrt.	4. Qrt.
East	20,4	27,4	90	20,4
West	30,6	38,6	34,6	31,6
North	45,9	46,9	45	43,9

Table 2. Turnover trends in market research (in million EUR).

Self-created table using data from McTabelle (1997)

#### 7 REFERENCES AND INDICES

#### 7.1 Reference list

The bibliography (reference list) lists all sources used in the thesis, arranged in alphabetical order.

Please note that different sources of the same author are listed according to the year of publication (oldest source first).

#### Listing sources in the reference list:

Journal Article:

Author's surname, First initial. Middle initial. (Year of publication). Title of the article. *Title of Journal,* Volume (Issue, if applicable), Pages. DOI

#### Example:

Mah, J., Kolev, K. D., McNamara, G., Pan, L., & Devers, C. E. (2023). Women in the Csuite: A review of predictors, experiences and outcomes. Academy of Management Annals, 17(2), 586-625. <u>https://doi.org/10.5465/annals.2021.0042</u>

#### Books:

Author's surname, First Initial. Middle initial. (Year of publication). *Title of the book.* Publisher. DOI

## Example:

Goldin, C. (2021). *Career and family: Women's century-long journey toward equity*. Princeton University Press. <u>https://doi.org/10.1515/9780691226736</u>

## Chapter in an edited book:

Author's surname, First initial. Middle inital. (Year of publication). Titel of the chapter. In editor's First initial. Middle inital Surname (Ed./Eds.), *Title of the book* (Pages of the chapter). Publisher. DOI

#### Example:

Teigen, M. (2012). Gender quotas on corporate boards: On the diffusion of a distinct national policy reform. In F. Engelstad & M. Teigen (Eds.), *Firms, boards and gender quotas: Comparative perspectives* (pp. 115-146). Emerald. <u>https://doi.org/10.1108/S0195-6310(2012)0000029008</u>

Further information on the bibliography:

• https://extras.apa.org/apastyle/basics-7e/#/

## 7.2 Figures, tables and abbreviations

All figures and tables must be documented in a separate index. This also applies if only one table or figure is used. Please list abbreviations you have introduced yourself in a list of abbreviations. You do not have to include abbreviations recorded in a dictionary. In the appendix of this guide, you will find samples of lists of figures, tables, and abbreviations that you can use as templates for your work.

## 8 FORMATTING AND LAYOUT

#### 8.1 Page Layout

- Format: DIN A4; printed on one or both sides
- Margins: Left and top 3 cm; 2 cm bottom and right

- *Font:* Arial or Times New Roman, 12 point, justified, 1.5 spacing, 6 point spacing between paragraphs
- *Page numbers:* Arial or Times New Roman, 10 point, single-spaced, inserted in the footer at the bottom right. The numbering starts with the introduction. The table of contents, list of figures, list of tables and abbreviations, the appendix, and the bibliography are given page numbers in Roman numerals. The intermediate text body of the paper is numbered using page numbers in Arabic numerals. The footnotes can be numbered consecutively.
- *Footnotes:* Arial or Times New Roman, 10 point, justified, single-spaced. Please use footnotes sparingly and avoid endnotes.
- *Figures and tables* exceeding one single page should be presented in the appendix. Smaller figures and tables can be included in the body text.

#### 8.2 Gender and diversity conscious language

With contemporary gender and diversity conscious language, we aim to acknowledge diversity, communicate without discrimination, and do so in a clear and understandable way. We recommend <u>the toolbox information from the Freie Universität Berlin</u>, as well as <u>the language</u> <u>guidelines from Humboldt Universität</u> and <u>Technische Universität Berlin</u>. There, you will find information on what gender and diversity conscious language is and why it is important to use it. You will also find many tips on how to incorporate it into your thesis.

In line with these guidelines, we recommend using the gender asterisk as an inclusive way of referring to gender. Additionally, you can use gender-neutral formulations.

Example: Instead of *The manager speaks with his employees*: *The manager speaks with their employees.* 

Gender- and diversity-conscious language also involves paying attention to linguistic expressions that invoke stereotypes or may seem discriminatory. Often, there are good alternatives.

#### Examples:

Instead of The chairman of the board is responsible for overseeing the company's strategy:

The chair of the board is responsible for overseeing the company's strategy, or

The chairperson of the board is responsible for overseeing the company's strategy. Instead of Mankind's ability to adapt to technological changes is crucial for economic growth:

People's ability to adapt to technological changes is crucial for economic growth, or Humanity's ability to adapt to technological changes is crucial for economic growth.

#### 9 AFFIDAVIT

The last page must contain an affidavit, which assures that you have written the thesis independently without any external help of a third party and only based on the named sources in the reference list. Your work will be checked for plagiarism by automatic scanning software. You must further declare that your thesis has not been submitted to any other institution. Please use only the designated template, available on the Examination Office's website.

#### 10 EVALUATION CRITERIA FOR SCIENTIFIC PAPERS

When evaluating theses, we are guided by the following questions:

Does the thesis contain...

- 1. a clear and well-founded research question?
- 2. an appropriate and substantial theoretical foundation?
- 3. an appropriate **research design** with a transparent description of the approach to data collection and analysis?
- 4. a precise and qualitative or quantitative **empirical analysis** that is free of errors (in the case of empirical work)?
- 5. a thorough **interpretation of the results** with reference to the theory or the hypotheses put forward?
- 6. a precise explanation of what **contributions to research and practice** you make with your work, what the **limitations of the work** are as well as **further research needs**?
- 7. a clear and logical structure?
- 8. a correct **formal design** (citation, spelling and grammar, style and expression, visual presentation)?