

Technische Universität Dresden

IHI Zittau

Chair of Business Administration,

Especially Environmental Management

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Seminar paper

Guidelines for the Preparation of Scientific Papers and Presentations

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Foreword

Dear students,

You are now faced with the task to prepare a scientific work in the form of a seminar paper for one of our courses or in the form of a final thesis. For this, you have a given topic area or rather a specific task as your objective.

Before you start working, please **read these guidelines carefully**. They have been prepared to support you during the process of your scientific work and provide you an insight into the criteria we use to **evaluate your performance** and what our chair expects concerning the **rules for formal design** of scientific papers.¹

Yours sincerely,

Remmer Sassen

¹ In addition to these rules, the regulations of the responsible committees for the preparation of scientific papers also apply.

Abstract

This manual "Guidelines for the Preparation of Scientific Papers and Presentations" provides numerous working instructions and tips for the preparation of scientific papers. In addition to listing and explaining the assessment criteria for written papers and defence presentations, it contains numerous requirements for the design, formatting and structure of seminar papers and theses. Instructions on correct citation, citing of sources and documentation of literature research support the student in maintaining the necessary transparency and traceability in academic work.

Keywords: scientific work; Master's thesis; defence, thesis; formalities

Remarks

Language constructs the reality of our lives. Our chair supports the use of gender-neutral language to promote equality of all gender. In this guide, gender-neutral wording has been chosen whenever possible. If this was not possible, the female form was used, which, however, explicitly refers to all gender identities.

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List of Abbreviations

FIS	Forschungsinformationssystem (Research Information System)
SLUB	Sächsische Landes- und Universitätsbibliothek
TU	Technische Universität

1. Introduction

The introduction introduces the topic. The first part consists of the motivation of the paper, addressing the academic gap and points out the objective. The second part outlines the structure.

1.1 Objective

These guidelines provide a basis for the preparation of scientific papers and presentations at the Chair of Business Administration, especially Environmental Management. They should give you various references in form and content. This guidelines themselves are drawn up according to these rules. Thus, they are particularly useful when preparing a paper or a presentation.

1.2 Structure

At the beginning of the paper there is a description of the evaluation criteria for the written part of a scientific work used for grading. In the third part of this paper, you will find the elements of the formal design for the written part of a scientific work. Here the focus is on the structure, the respective paging as well as the design of the title page. Furthermore, the design for tables and lists, e.g. the table of content, the text component and the bibliography, are explained. In the fourth section you will find information about the bibliographical references while the fifth part describes the evaluation criteria for the oral part of scientific work. Finally, hints for a successful presentation are provided and the paper closes with a short summary.

2. Evaluation Criteria for the Written Part of a Scientific Work

The most important principles for the preparation of scientific work are **transparency and traceability of the process and the logic of content**. The evaluation is based on the usual structure of a scientific work and lists specific criteria and questions in the form of a check list:

1. Introduction and Abstract

Do introduction and abstract summarize the work? Are the following points included?

- Motivation of the paper
- Academic gap
- Aims and Objectives
- Research questions and/or hypotheses
- Scientific contribution
- Structure (not in the Abstract)

2. Theoretical Background

Definition of topic and concept?

- Terminology

Identification of current state of research and academic gap?

- Critically reflected summary of preliminary studies (in terms of content and methodology)
- Identification of gaps and contradictions
- Quality of literature (scientific character, topicality)

Is the problem statement of the paper derived?

- Derivation of objective of the paper
- Derivation of research questions and/or hypotheses
- Derivation of scientific contribution

3. Methodology

Are procedure and scope of the study defined?

- Documentation and justification of the research design
- Documentation and justification of the chosen approach
- Assumptions and limitations

Is the sample described clearly and comprehensibly?

- Selection and justification of the sample

Are methodology and procedure described clearly and comprehensibly?

- Selection and correct implementation of the data collection method
- Selection and correct implementation of the data analysis method

4. Results and Discussion (in most cases two chapters in the paper)

Are the results of the work presented?

- Description of findings

Are the results of the work synthesized?

- Synthesis
- Gaps and contradictions in the findings
- Comparison with existing research
- Answering research questions and/or hypotheses

5. Conclusion

Does the conclusion summarize the work?

- Objective of the paper
- Summary of most important findings
- Own considerations
- Conclusions for science and practice
- Limitations of the work
- Prospective need of research

6. General

Is the paper structured meaningfully and comprehensibly?

- Outline
- Transition and summaries
- Reasoning and justification of choices

How is the literature managed?

- Quantity of literature (approximate value: seminar paper: 30-50, Master's thesis: 50-100 sources)
- Correct and consistent citation

How are figures and tables used?

- Sense of purpose
- Readability (e.g. appropriate captions)

Further formalities

- Linguistic correctness (orthography, grammar, terminology)
- Compliance with the chair's guidelines for scientific work

3. Elements of the Written Part of a Scientific Work and their Formal Design

3.1 Structure and Paging

All lists and necessary appendices start on a new page. If the number of entries in the particular list is very low, it is also possible to insert more than one on a page. Concerning final theses, the main chapters start on a new page as well. The paging is to be found in Table 1

Table 1: Structure and Paging

Order of particular parts	Page numbers
Title Page	without
Abstract	without
Remarks	without
Table of Content	Roman page numbers, starting with I
List of Tables	Roman page numbers, continuing from Table of Contents
List of Figures	Roman page numbers, continuing from Table of Contents
List of Abbreviations	Roman page numbers, continuing from Table of Contents
List of Symbols	Roman page numbers, continuing from Table of Contents
Text Component (= elaboration with regards to content)	Arabic page numbers, starting with 1, subdivision in chapters and paragraphs
Appendix	Roman page numbers, continuing from Table of Contents
Bibliography	Roman page numbers, continuing from Table of Contents
List of Laws and Judgments	Roman page numbers, continuing from Table of Contents
Declaration of Honor	without
Right of Exploitation	without
Declaration of Authorship	without

(Own presentation)

Figure 1: Title Page Design of Theses (own presentation)

3.3 Suggestion for the Title Page Design of Seminar Papers

Technische Universität Dresden

IHI Zittau

**Chair for Business Administration,
Especially Environmental Management**

Prof. Dr. Remmer Sassen

Seminar Paper

[Title from syllabus of respective course]

Surname, First name:	Mustermann, Maxine
Matriculation number:	1234567
E-mail address:	maxine.mustermann@mailbox.tu-dresden.de
Duration:	01.03.2020 – 30.06.2020
Supervising tutor:	Prof. Dr. Remmer Sassen

Figure 2: Title Page Design of Seminar Papers (own presentation)

3.4 Abstract

The beginning of the paper must contain a summary of approximately ½ page for seminar papers and approximately 1 page for theses. The Abstract includes

- the title of the paper,
- an abstract, i.e. a short summary of the content which, however, does not have to contain any new formulations, but can be derived from the introduction and summary of the paper, and
- some keywords (at least three, list synonyms as well, separate keywords with semicolons).

3.5 Remarks

In the remarks, general annotations on the work can be added, which the author would like the reader to note before reception.

If necessary, the gender statement is also inserted at this point. Generally, the chair prefers the use of gender-neutral language, i.e. wherever possible, gender-neutral formulations are to be chosen. The gender colon is to be used as the gender-marker. If gender-neutral language is not used for reasons of better readability, a gender statement must be written in the remarks. This should state which gender is used and that this form always applies to all gender identities.

3.6 Table of Contents

The table of contents contains every chapter headline as along with the lists of tables, abbreviations and symbols and the list of figures. Furthermore, the appendix along with the bibliography and the list of laws and judgments (if available) are included. Every entry in the table of contents has a respective page number.

3.7 List of Tables

The list of tables contains every table present in the main text and appendices (concerning formal caption of tables see chapter 3.11.4) with their labelled number, description² and respective page number.

3.8 List of Figures

The list of figures contains every figure present in the main text and appendices (concerning formal caption of figures see chapter 3.11.5) with their labelled number, description³ and respective page number.

3.9 List of Abbreviations

Abbreviations are enlisted in the list of abbreviations. If non-familiar abbreviations are used, e.g. EC for equity capital, they must be written out when firstly mentioned. Usual abbreviations like “e.g.” are not needed to be named in the list of abbreviations. Abbreviations of journal names need to be separately marked. Check if there are generally accepted usual abbreviations

² Without source

³ Without source

before using self-made creations. In the text component section, you should use a “protected space” [shortcut: [ctrl], the shift button and space] so abbreviations cannot be separated.⁴

Examples for abbreviations:

- CIM Computer Integrated Manufacturing
- JOM Journal of Management (Journal)
- IMF International Monetary Fund
- ECB European Central Bank
- POTUS President of the United States
- EDP Electronic data processing
- NYT New York Times (Journal)
- LRP Long Range Planning (Journal)

3.10 List of Symbols

If many variables in mathematic formulas are used, they need to be explained when firstly used. Together with the meanings (unpaginated) they have to be summarized in alphabetical order in the list of symbols. If many symbols are used, the following outline is recommended:

- Capital letters,
- Lower case letters and
- Greek letters.

3.11 Text Component

In the text component the following aspects must be pointed out.

3.11.1 Text Arrangement

The work needs to be written electronically. The line **spacing is exactly 16 points** and **paragraphs** are formatted with a break of **6 points** after the paragraph. The **text** should be written **fully justified**. Keep in mind to use a suitable hyphenation, you can either choose automatic or manual syllabication. If you choose the manual one, the use of a “protected hyphen” [shortcut: [ctrl] and hyphen] is recommended. Usual hyphen should not be used for syllabication.

In **seminar papers** and **Master’s thesis**, the **margin is 3.5 cm at the left** (for the binding of the work) and **1.5 cm on the right side** of the page. The **top margin is around 2 cm** while the **bottom margin is 2 cm**.

The font is **Times New Roman** and the **font size 12**. The present “Guidelines for the Preparation of Scientific Papers and Preparations” have been written in this formatting.

Footnotes, tables and overviews are allowed to be formatted in smaller or different fonts than the standard format given above. Additionally, **footnotes** are to be **numbered consecutively** and have a **plain line spacing of 9 points** but generally follow the font in the whole document,

⁴ The same principle is also useful for units, e.g. 3 m, 10 sqm or 20 %

i.e. headlines, text component, headers and footers as well as page numbers should be consistent. Font size 9 is recommended for footnotes which are also formatted in justification.

The document should be written in the present tense and in the third person. First person styles and expressions such as “one” should be avoided. Own assessments could be identified by formulations such as “in the opinion of the author” or in first person style.

The length of the pure text part (= content elaboration of the topic) for Master's theses is between 50 and 70 pages. For the length of the text part of seminar papers, please refer to the corresponding syllabi of the courses.

3.11.2 Numbering of Headings

Headings should be serially numbered with Arabic numbers in the text as well as in the table of contents. In the subdivision a sub-item (e.g. 1.1) is always followed by at least one another sub-item (e.g. 1.2) on the same hierarchical level.

Example:

- 1
 - 1.1
 - 1.1.1
 - 1.1.2
 - 1.2
- 2
 - 2.1
 - 2.1.1
 - 2.1.2
 - 2.2
- 3
- etc.

3.11.3 Citation and Bibliographical References in the Text

Quotation helps the distinct description and localization and therefore provides the necessary traceability so that other parties can verify the quotes. Please use a reference management software such as Zotero (<https://www.zotero.org>) to simplify the handling of citation styles and citation information.

Direct quotes

Directly cited text passages are only used if the exact wording is highly significant or if it is a very successful formulation, e.g. definitions. Direct quotes must be enclosed in quotation marks. If one or more words are omitted within a quotation, this must be marked with three dots. If highlights are made in the quotation itself, these are also transferred. If a word or word group is to be highlighted within the direct quotation, this must be indicated (highlighting of the author). Necessary additions within a quote, e.g. to complete a clause are in square brackets [...].

Indirect quotes

Most quotations should be indirect. A corresponding quotation is if another author's thought or – in the sense of condensing literature – if the work of several authors is adopted. All text passages taken from literally or correspondingly published or unpublished writings must be cited using bibliographical references in short form in the text. The following rules should be observed (see Table 2).

Table 2: The right Placing of Quotations

If the quote refers to ...	Then the citation occurs ...
• A direct quote,	• After the quotation mark (“”).
• A specific term,	• Directly after the term.
• Immediately following a group of words (within a sentence)	• Before the punctuation mark (,).
• A sentence (within a paragraph)	• Before the last punctuation mark.
• A paragraph	• After the last punctuation mark at the end of the paragraph.

(Own presentation.)

The corresponding page number (author, year: page reference) is only obligatory for direct quotations but can also be added for indirect quotations. Use the citation style of the American Psychological Association (APA) in the current version, but specifically use the citation with the page number of the reference when quoting directly, i.e. author, year of publication and page number: <https://apastyle.apa.org/> and <https://www.scribbr.de/category/apa-standard/>.

Please note that APA does not include quotations in the footnotes but rather quotations in brackets in the text according to the table above (author, year, page number). Footers are only used for annotations to the text.

If an author or editor quotes at least two books or articles from the same year, lower case letters must be added after the year (Deppe, 1997a; Deppe, 1997b) to ensure a clear reference to the correct bibliography. If a text passage that extends over two or more pages, this must be indicated as follows: “pp. 10-25”. For comments it is usual to indicate the commented paragraph or the number of the note or the item.

Direct citations in foreign languages must be translated into the language in which the work is written. After the source reference, the original language and the origin of the translation must be indicated after a comma: ([Source], translated from [language] by the author). For indirect citations in foreign languages, follow the regular citation rules.

3.11.4 Tables

All tables used in the text and the appendix must be serially numbered in Arabic letters and included in the text layout, i.e. the corresponding table should be referenced to in the course of the text and also the respective table content should be mentioned. In each case the source must be documented separately below the table, e.g. “Own presentation in accordance with Berendt

et al., 2002: 37” or “Berendt et al., 2002: 37”.⁵ The title is placed above the table. One principle is that both tables and figures should be understandable independently. Accordingly, titles and captions should be meaningfully formulated. Avoid abbreviations or otherwise define them in the description.

3.11.5 Figures

All figures used in the text and the appendix must be serially numbered in Arabic letters and included in the text layout, i.e. the corresponding figure shall be referenced in the text and the respective figure content should be referred to if possible. The title (caption) is placed under the figure. Here, too, the principle applies that the title and illustration should be self-explanatory. The text should refer to the figure, and the reference is to be documented separately.

Example:

Figure 1: The growth share matrix of the Boston Consulting Group (Hedley, 1976, p. 235)

If a figure from the literature is graphically modified or supplemented, the source must be indicated as follows:

Example:

Figure 2: The balance sheet structure of German stock corporations (based on: Müller, 1986, p. 38)

Figures which are only used in the courses of the chair and which have already been graphically modified or supplemented must contain both the source and the revision by the chair:

Example:

Figure 3: Objects of the IÖW Life Cycle Inventory (based on: Halley, 1990, p. 33; revised by the Chair of Business Management, especially Sustainability Management and Environmental Accounting, course “Ecology-oriented information and decision-making instruments” in SuSe 2002, TU Dresden)

The authors own figures must be indicated appropriately:

Example:

Figure 4: Equity ratios of German stock corporations (own presentation)

3.11.6 Formulas

Formulas are numbered consecutively in sections. When deriving a formula, only the initial equation and the final solution are usually referred to. The intermediate steps must also be listed to understand the broader context and are therefore also numbered. The text within the formulas is formatted as “normal text”.

Example:

$$\text{Eco factor} = K \cdot \frac{1}{\text{Standardization quantity}} \cdot \left(\frac{\text{Actual quantity}}{\text{Tolerance quality}} \right)^2 \cdot 10^{12} \quad (3.1.)$$

⁵ The examples shown in the following chapter also apply to tables.

3.12 Appendix

As a supplement to the remarks in the text, overviews, tables and graphs can be included in the appendix, e.g. questionnaires for conducted empirical investigations. Additionally, the documentation of literature research (see point 0) is attached. Please refer to the relevant appendix at the appropriate places in the text. The appendix **does not** contain any explanatory text, i.e. no explanations necessary for understanding the paper, nor any further explanations, e.g. assessments of findings or figures belonging to the text.

3.13 Bibliography

The bibliography contains all sources cited in the paper. Sources that are not mentioned in the text or footnotes are **not included** in the bibliography. The current version of the APA citation style guidelines also apply here.

Electronic publications – original sources

Concerning electronic publications – i.e. publications originally published on the internet, e.g. in electronic journals (e-journals), as full text documents and which are not available as print version – it should be kept in mind that in general everyone has free access to provide information about this medium. For that, they **should be handled with the outmost caution** and be scrupulously reviewed.

At this point, however, it should be noted that also print media cannot be assumed to guarantee the correctness of their information although publishers and editorial offices can perform a selective and quality-assuring function. Here, a peer-reviewed evaluation and a comparison of different opinions are necessary as well.

Due to the special features of electronic publications, in which entries can be modified in content any time, be relocated, deleted or possibly be modified without authorization in the case of unprotected files, they require a special citation style. It must be considered that this rapid changeability often does not guarantee the traceability. Therefore, it is crucial to specially select the sources.

For the general citability of the internet, please refer to:

Runkehl, J., & Siever, T. (2000). *Das Zitat im Internet ein Electronic-style-Guide zum Publizieren, Bibliografieren und Zitieren* (2nd ed.). Revonnah. <https://dnb.info/960731814/04>

Due to the volatility of information, a backup in the form of a printout of the relevant online pages or storage on data carrier is recommended to ensure the subsequent verifiability by the reader as a sign of scientific working method. For this, the screenshot-function in the browser or the manual taking of screenshots are suitable methods.

For sources without an explicit title or without reference to the author, the title of the hypertext page is to be mentioned alternatively.

Electronic publications – secondary sources

Increasingly, research reports, articles, conference proceedings and the like that were originally published in printed form, are also published electronically in full texts on the internet. In this

case, the traditional bibliographical information on the printed source is enough and should just be supplemented by the indication of the URL if this has not been published as a printed version.

Universitäts- und Landesbibliothek Münster (Eds.) (2006, 17. May). *Recherchekurs Wirtschaftswissenschaften*. Retrieved on 08.04.2008 at <http://lotse.uni-muenster.de/wirtschaftswissenschaften/>

3.14 Documentation of Literature Research

The basis of all scientific work is a comprehensive and specific literature research. Web of Science, EBSCO Business Source Complete and ELSEVIER ScienceDirect are recommended for database searches. Depending on the topic and the number of hits, further databases (publisher level) are to be consulted. The documentation supports the literature research process considerably and facilitates further research based on the already collected results. For this reason, a documentation of the used search terms and the used research sources (subject databases, library catalogues, search engines) should be included in the appendix. It is recommended to do so in tabular form as shown in the appendix in Table 3. In addition to the regular literature research which is based on the key words of the task or the title, it is important to carry out another topic-oriented research if it is necessary in the course of the paper.⁶

For the administration and management of the literature used in the work, the use of an adequate software is recommended. The Chair of Business Administration, especially Environmental Management recommends the free literature management software “Zotero” as well as the literature management program “Citavi”, for which free licenses are available to students at the TU Dresden.

3.15 List of Laws and Judgments

If the paper contains a greater extent of laws and/or regulations and references to court decisions, a separate list of laws and judgments is to be included after the bibliography. It should state all laws and/or regulations with their full name, source and the used version.

The judgments should be listed in chronological order by court, indicating for each court decision the respective court, reference number, date of judgment and source.

Examples:

- Law on the introduction of the ecological tax reform 1999 in the version of the announcement of 24th March 1999 (BGBl 1999 I No. 1, p. 378).
- German Bundestag – printed matter 257/83: Bill of the Federal Government. Draft law implementing the Fourth Directive of the Council of European Community on the Coordination of Company Law (Accounting Directives Act) with justification of 3rd June 1983.
- BFH: IV 165/595 of 17th March 1961 (BStBl 1961 III, p. 237).

⁶ Mind maps can be supportive in this process.

3.16 Declaration of Honor

For seminar papers and final theses, the author(s) must declare in writing that they prepared the paper themselves and did not use any other sources and aids than those indicated. This declaration must be classified with place, date and original signature and must be included in the paper after the list of laws and judgments:

Sample:

Declaration

I hereby declare that I have prepared that present work independently and without the use of other aids than those indicated. I have declared all aids used (including AI assistance systems) in a list. I further indicated all thoughts taken over directly or indirectly from external sources as such. The work has yet not been submitted to any other examination authority in the same or similar form and has yet not been published. I am aware that an untrue declaration will have legal consequences.

I agree that the work will be checked for plagiarism with the help of a plagiarism detection service.

Dresden, Day.Month.Year

Handwritten signature

3.17 Transfer of Copyright

For seminar papers and final theses, the usage right is assigned to the Technische Universität (TU) Dresden. According to the Examining Board, the written work must be supplemented by the following text, with place, date and signature which is included after the declaration of honor (see chapter 3.16):

Sample for seminar papers:

Transfer of copyright

I hereby give my consent to the TU Dresden and the Chair of Business Administration, especially Environmental Management at the TU Dresden, to publish my seminar paper in the publication series “Dresden’s Contributions to the Teaching of Environmental Management and Accounting”.

I authorize the SLUB Dresden on behalf of the Chair of Business Administration, especially Environmental Management, to archive the electronic version of my seminar paper in full text to an indefinite period of time and to make it publicly available on its servers for use on the internet. I agree to the necessary duplication and possible conversion of the data of the document as well as the automatic storage and publication of the personal data belonging to the document.

Dresden, Day.Month.Year.

Handwritten signature

Sample for final theses:

Transfer of copyright

I hereby grant TU Dresden a simple, perpetual, irrevocable and transferable copyright for any media, both for protectable results and for programs that can be protected by copyright. The transfer of the use to third parties requires the consent of the supervising university teacher.

Dresden, Day.Month.Year.

Handwritten signature

3.18 Declaration of Authorship

For seminar papers, a declaration of authorship is required. We provide you a form which is available in the download area on the homepage of the chair. This form must be signed and included in the paper after the right of exploitation. Please clarify early with your co-authors whether the seminar paper should be evaluated as joint authorship or individual achievement. In the latter case, please clarify who prepares which part as an individual service and consequently receives individual grades.

3.19 Confidentiality Notice

Only relevant when working with external partners. If a cooperation partner requires a confidentiality notice, this can be inserted before the abstract directly after the title page of the thesis. Both a cooperation partner's templet and/or the notice below can be used. Please also discuss this with your supervisor.

“This work is based on confidential, internal data of the “cooperation partner”⁷ and for this reason may not be viewed by third parties without the consent of the author and the “cooperation partner” - with the exception of the academic supervisors or the academic staff responsible for the examination procedure, the examiners, the members of the examination board and the university staff involved in the examination procedure and, in the event of a legal dispute, the legal department of the TU Dresden, lawyers, experts and courts involved in the examination procedure”.

(Place, date)

(Signature)

3.20 Submission

Master's theses are to be submitted bound (hard cover) in duplicate to the Examination Office. From there, they will be forwarded to the chair.

Depending on the course, seminar papers are to be submitted to the chair in a single copy, punched and stapled with a fastener, in written form. In order to conserve resources, we do not use binders, folders or the like. We generally recommend the use of recycled paper and a double-sided printout of the seminar or Master's thesis.

In addition, the complete work for both, final theses and seminar papers, must be submitted electronically *in one file* to the office management of the chair. The text files must be

⁷ Adjust accordingly

in Microsoft Word and PDF format.⁸ In addition, further files of programs used in the work (Histcite, Excel, MAXQDA etc.) must be submitted.

⁸ The programs can be used in the computer pools of the university.

4. Bibliographical References

Before starting with your scientific work, we highly recommend reading the following media concerning a systematic literature research:

- Kornmeier, M. (2007). *Wissenschaftstheorie und wissenschaftliches Arbeiten*. Physica-Verlag
- Hart, C. (2001). *Doing a literature search. A comprehensive guide for the social sciences*. Sage
- Deppe, J. (1997a). Die Literaturrecherche: Kein Buch mit sieben Siegeln, Teil 1. *WISU – Das Wirtschaftsstudium*, 1, 24-25
- Deppe, J. (1997b). Die Literaturrecherche: Kein Buch mit sieben Siegeln, Teil 2. *WISU – Das Wirtschaftsstudium*, 2, 108-110

For the preparation of scientific papers, please also refer to the following detailed descriptions as further literature:

- Brink, A. (2007). *Anfertigung Wissenschaftlicher Arbeiten. Ein prozessorientierter Leit-faden zur Erstellung von Bachelor-, Master- und Diplomarbeiten* (3rd revised ed.). Oldenbourg Verlag
- Cooper, H. M. (1998). *Synthesizing Research: A Guide for Literature Reviews*. Sage
- Kuckartz, U., & Rädiker, S. (2019). *Introduction: Analyzing Qualitative Data with Software*. In U. Kuckartz & S. Rädiker (Eds.), *Analyzing Qualitative Data with MAXQDA: Text, Audio, and Video* (pp. 1–11). Springer International Publishing. https://doi.org/10.1007/978-3-030-15671-8_1
- Theisen, M. R. (2011). *Wissenschaftliches Arbeiten. Technik – Methodik – Form* (15th ed.). Verlag Vahlen
- White, E. B. & Strunk, W. I. (1999). *The Elements of Style*. (4th ed.). Pearson Longman.
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5. Guidelines on the use of artificial intelligence

The rapid development of Artificial Intelligence (AI) and the associated easy availability of various AI applications offers a lot of potential, but also some challenges for research. In particular, the use of generative models such as ChatGPT, Perplexity, Dall-E and all other available AI-based applications that generate text, images, tables and/or graphics requires a transparent approach and adherence to certain principles in line with good scientific practice (Deutsche Forschungsgemeinschaft, 2023).

Compliance with data protection and the protection of intellectual property take centre stage. TU Dresden has drawn up a statement with recommendations on this, which can be found at the following link: <https://tu-dresden.de/tu-dresden/digitalisierung/ki-an-der-tu-dresden/nutzung-von-ki-an-der-tu-dresden>

The following points are of particular importance when using AI-supported applications:

- **No input of personal data**
 - Use of anonymised data only, which does not allow any conclusions to be drawn about specific persons.
- **No output of personal data**
 - Do not use AI-generated data containing personal information such as name, gender, age, etc.
- **Data minimisation during service selection, registration and use**
 - Only provide the absolute minimum of data required to process the request (prompt).
 - If registration is required, use the TU Dresden functional e-mail address, which you can find in the self-service portal.
 - The TU Dresden VPN access is used for using the AI applications off campus.
- **Check results for accuracy**
 - The texts generated by the AI must always be checked, as well as the (allegedly) used sources, as there is a high risk of plagiarism.
 - Copyrights must not be violated.

In addition, the following regulations and recommendations apply to the Chair of Environmental Management:

- AI tools for spell or grammar checking are permitted, e.g. Grammarly or DeepL. Their use must be indicated in a **footnote**.
- If AI tools are used for translation, the appropriateness of the translation must be checked and the use of the tool must be indicated in a **footnote**.
- It is recommended not to use text-generating AI software such as Chat GPT.
- Text-generating AI tools should not be used to create complete sentences or paragraphs.

- Text-generating AI tools should only be used for support or as a suggestion and should be cited accordingly.
- It is necessary to document the entire process transparently and in a way that is comprehensible to third parties, as the AI-generated results cannot be reproduced.

Citation of AI tools

The reference must include the company or developer, the name and version and the date of use of the AI tool. The use of an AI tool must be cited in three ways:

- 1) in the text - (Open AI, Chat GPT-3.5, 2024a)
- 2) in the bibliography - Open AI (2024a). Chat GPT-3.5. used on: 01.01.2024.)
- 3) in a table in the appendix - labelled and with the entire prompt history

Example:

Citation	Complete prompt and answers
(Open AI, Chat GPT-3.5, 2024a)	
(Open AI, Chat GPT-3.5, 2024b)	
(Open AI, Chat GPT-3.5, 2024c)	

6. Evaluation Criteria for the Oral Part of a Scientific Work

The emphasis in the evaluation of the oral performance of a scientific work (presentation) is on the content of the paper, presentation style, slides, adherence to the given presentation time and the subsequent discussion.

The following sub-categories are within the scope of these evaluation criteria:

1. Content of the presentation

Structure, transparency, and traceability

- Differentiation and objective
- Constitution
- Topic overview
- Focus
- Summary of results

Logic / evaluation and display of the content

- Level of detail
- Explanation of context
- Instances
- Conclusions
- Application to objective

Handout (if available)

- Overview
- Focus
- Courtesy to presentation
- References
- Clarity in the sense of structure and constitution
- Logic
- Formal design

2. Slides

- Readability
- Clarity
- Vividness
- Creativity
- Formal mistakes
- Expressiveness

3. Presentation style

- Volume
- Clear speaking / mumbling
- Rate of speaking
- Monotonous speaking / accentuating
- Engagement
- Facing audience / averted from audience

- Free speech / reading
- Nervousness / self-consciousness
- Expression (colloquial speech, diversity of speech, scientific language)
- Posture

4. Adherence to the given presentation time

The presentation time of the defense of the Master's thesis is usually 20 minutes. The scope of the presentation of seminar papers is to be found in the respective syllabus of the courses.

5. Oral performance

Introductory note

- Reference to content (not style)
- Constructive criticism
- Creative introductory questions
- Discussion encouragement

Discussion

- Depth and sovereignty of answers
- Answering style

7. Hints for the Presentation

The following hints for the presentation are just an outline and need to be concretized individually. They point out i.a. which formal aspects might influence the audience's attention.

Perfection is achieved, not when there is nothing more to add, but when there is nothing left to omit.

(Antoine de Saint-Exupéry)

Basically, you should test your presentation beforehand concerning aspects like adherence to time and no exceeding. This is a very important basic requirement for a successful presentation! If you necessarily need to shorten your presentation, stick to what Saint-Exupéry said as a basis.

1. How is your outward appearance?

- Target group-specific clothing?
- Are the clothes (not) too casual?

With your clothing you also underline the meaning of the presentation!

2. Do you have a clear structure?

- Is there a hook, an introductory hypothesis or reason at the beginning?
- Does the whole audience understand the topic? Where are explanations necessary?
- Are bullets chosen purposeful?
- Is there a logical order in the structure?
- Did you restrain to the main points?

For media which primarily want to inform, consider the following aspects:

- ☐ Reduction to the essentials
- ☐ Essentials in the center of the view
- ☐ Essentials are the largest in terms of area
- ☐ Comprehensible picture language
- ☐ Viewing habits: from left to right, from top to bottom
- ☐ Presentation technique

Figure 3: Creation of Slides, Posters and Flipcharts I (Based on: Berendt et al., 2002, D 1.1: 37)

- Do you need written notes?
- Are there any practical examples you could use?
- Are there possible jokes and gags you could implement as an icebreaker?



Figure 4: Picture Elements: Picture 2 (Berendt et al., 2002, D 2.1: 11)

- Do you have a good conclusion for your presentation?

Learn the first introductory sentences as well as the closing sentences by heart!

3. Do you use any media to support the visualization?

- Use the learning effects: Experiencing is better than seeing, seeing is better than hearing?

Is every slide understandable on its own? Is it possible to immediately follow again for someone who zoned out shortly?	☐
Does the viewing direction operated by the layout go hand in hand with the order of the explanation of the content? Generally, you use a top down order or from left to right (reading direction); through optical elements this order can be affected.	☐
Do the used animations support your speech or are they distracting?	☐
Is there a clear connection and differentiation to the previous and subsequent slides?	☐

Figure 5: Test Questions to a Finished Visualisation (Berendt et al., 2002, D 2.1: 4)

- Do you use gap files for your audience to make it easier to follow?
- Do you use descriptive pictures to support the text (“a picture can replace a thousand words”)?
- Are the slides readable (font and font size, hand script vs. printed version)? Is the wide format applicable?
- Use a sans-serif font such as Verdana or Arial.
- Use the TUD corporate design.

- You should not use more than three font colors. Highly avoid the color “yellow“, rather use pastel yellow for base areas.

Functions of color:

- Color as an instrument to structure (e.g. connected issues in the same color)
- Color as an instrument to highlight (especially for bicolored designs/assessments)
- Color as an instrument to carry information is then necessary if it helps the understanding of the issue
- Color as learning support: people always associate certain (culture-based) feelings with colors; e.g. in politics, in traffic and concerning human emotions colors have a specific meaning
- Color as an addition to make something colorful, but mostly this distracts from the main point and is finally not helpful

Figure 6: The Use of Colors (Based on: Berendt et al., 2002, D 1.1: 14)

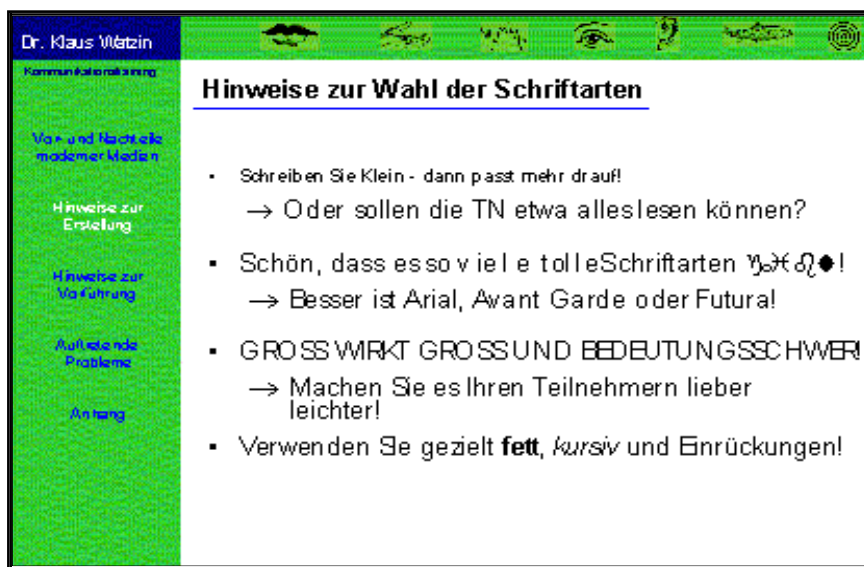


Figure 7: Font Design (Berendt et al., 2002, D 2.1: 8)

- Are the slides clearly structured? (Headline – line – statement – figure – footnote)?

- ☐ Amount of information (less is usually more)
- ☐ Readable font size
- ☐ Color (functional instead of colorful)
- ☐ Typography as an instrument to structure
- ☐ Indication of headline, title
- ☐ Insert margins
- ☐ Rather landscape format than portrait format (if possible)

Figure 8: Creation of Slides, Posters and Flipcharts II (Based on: Berendt et al., 2002, D 1.1: 37)

- Visual media should just contain this much information a reader can adapt with one view. This is generally less than the presenter assumes.

- Limit the scope of the text. Use keywords and headnotes on slides, posters or flipcharts. Only in reasonable exceptional cases you can use longer sentences.

The subsequent rules of thumb should be followed:

- Avoid “nice-to-know” information that are not necessary to understand the issue
- Avoid the “Show what I know syndrome”: just show the relevant information to your audience and not everything you know
- Do not insert more than 6-9 lines among each other
- Do not use more than 5-7 words per line
- Do not insert more than 5-7 details on one slide, poster or flipchart
- Leave margins (around 2-5 cm)

Figure 9: Limit of Information Amount (Based on: Berendt et al., 2002, D 1.1: 13)

4. Do you use skillful gestures?

- Do you use gestures to get the audience’s attention?
- Do you have eye contact the whole audience?

During the presentation:

- ☐ Do not stand in the audience’s visual field or the projector line
- ☐ To explain slides on a projector use the projected screen, to explain posters directly show on it
- ☐ Talk to the audience while facing the auditors
- ☐ Projector/beamer only turned on if necessary for the presentation
- ☐ Do not change slides or charts too fast
- ☐ Avoid a “presentation cinema” (one picture after one another the whole time)

Figure 10: Creation of Slides, Posters and Flipcharts III (Based on: Berendt et al., 2002, D 1.1: 37)

5. How is your posture?

- How is your appearance?
- Do you show self-consciousness?
- Do you face your audience while talking?

6. Do you control your speaking technique?

- Do you speak clearly?
- Consider your voice (high / deep, screaming / melodious)?
- Rate of speaking (fast / slow, rhythmic / staccato)?

- Do you change within higher and lower voice speaking phases? Avoid falling below the generally audible volume
- Do you use speech pauses?

7. Are you able to control your nervousness?

- Listen to other speeches
- Take chances to give own speeches as often as possible
- Memorize the “central theme”
- Remember your time management
- Use a modular structure for your presentation
- Dispense tranquilizers in your own interest!
- Alternatively use relaxing techniques (autogenous training, progressive muscle relaxing, breathing techniques)

For more in-depth information, we recommend literature on the subject of “scientific work” (also see bibliography).

8. Summary

After you read the guidelines of the Chair of Business Administration, especially Environmental Management, you should know how a seminar paper, a project work or final thesis is structured. Furthermore, you now know a multitude of formatting rules – from headlines to bibliography. You also got an insight into the evaluation criteria for scientific work and presentations. We want to encourage you to adhere to the formal requirements, so your grade will not be downgraded because of a missing list of figures, references or a poorly created bibliography. Use these hints to ensure a successful work.

Appendix

Table 3: Documentation of Literature Research.

Keyword	General hits in the researched sources			overall
	Source 1 (e.g. ScienceDirect) Hits (used)	Source 2 (e.g. SLUB data-bases) Hits (used)	Source x Hits (used)	
Topic 1:				
Keyword 1	3 (0)	26 (0)		0
Keyword 2		12 (11)	1 (1)	11
Scenario analysis & climate				
“scenario analysis” AND “climate change”	150 (10)	11 (1)		11
“scenario analysis” AND “climate adaptation”	56 (11)	0 (0)		11
“scenario analysis” AND “climate mitigation”	156 (99)	11 (1)		100
Topic 2:				
Keyword 1	3	26		0
Keyword 2		12	1	11
....	...	...	...	...

(Own assessment)

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