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Guidelines for Scientific Working at the Innovation Management Group

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GUIDELINES FOR SCIENTIFIC WORKING

ABSTRACT

This document summarizes the formal requirements and basic approaches for writing a Master or Bachelor Thesis and seminar papers at the Innovation Management Group of the Institute for Interdisciplinary Work Science at Leibniz University of Hannover. In addition, it offers helpful approaches and hints to facilitate the writing of your thesis. Therefore, we ask you to read the document carefully and attentively. Certainly, you are always invited to discuss any ambiguities or deviations from the guidelines with the supervisors at the group at any time. In that case, the agreements with the supervisors are compulsory, while the guidelines only represent the basic framework. If possible, please arrange an appointment with the supervisor two weeks before starting your thesis to discuss the general procedure and to narrow down the topics.

Keywords: Thesis; Seminars; Specifications; Approach; Tips;

1. INTRODUCTION

The purpose of writing a scientific paper is to systematically present a certain topic to an expert reader. The topic should be presented in a problem-oriented manner. The formal, content-related and stylistic requirements for a scientific paper at the Innovation Management Group at Leibniz University Hannover are detailed below. The written work should meet these requirements.

2. PREPARATION

2.1 Process

2.1.1 Bachelor Thesis

The Bachelor thesis must be registered in writing with the examination office in the sixth semester before 01 January or 01 July. Places in supervision are allocated by a central allocation procedure of the Dean of Studies Office. The collection of your topic takes place during the current semester. If there are valid reasons, the start of the Bachelor's thesis can be postponed to a later date. When you pick up your topic, your processing time begins, which ends with the submission of the thesis. The processing time for Bachelor's theses is two months. The processing time can be extended according to § 15 (2) of the examination regulations. The topic can be returned once within the first third of the processing time. A new registration after the return of the topic must take place within six months. If registration does not take place within this period, a topic determined by the examiner will be sent. Furthermore, the form for the obligation to maintain data secrecy must be signed by the student.

Further information on the process can be found at: <https://www.wiwi.uni-hannover.de/de/b-sc-wiwi-po-2017>

2.1.2 Master Thesis

Please note that the Area Strategic Management has a joint application procedure for Master's theses. You apply centrally via the following link, stating your preferences regarding the institute you would like to write at: <https://www.pua.uni-hannover.de/index.php?id=6190>

For the main registration period, the form is open from 01.01.-21.01. For students who cannot attend this main registration phase due to a semester abroad, internship or other valid reasons (you must coordinate this with the Dean of Studies Office beforehand), there is a second registration phase from 01.07.-21.07. The application documents are also submitted via the form. Please upload all required documents in a PDF document with the title "Last name, First name__BewerbungMA".

This application is then valid for one year. During this year, you can pick up your Master's thesis topic and start working on it. The processing time for Master's theses is six months. The processing time can be extended according to § 15 (2) of the examination regulations. The topic can be returned once within the first third of the processing time. A new registration after the return of the topic must take place within six months. If registration does not take place within this period, a topic determined by the examiner will be sent. Furthermore, the form for the obligation to maintain data secrecy must be signed by the student.

Further information on the procedure can be found at: <https://www.wiwi.uni-hannover.de/de/m-sc-wiwi-po-2018>

2.1.3 Seminar papers

The registrations for seminars of the Area Strategic Management take place via the central registration form, which can be accessed via the Institute for Human Resources and Labor. Registration for the seminars takes place in March for the summer semester

and in September for the winter semester. The seminar schedule can be found in the seminar description. Furthermore, the form for the obligation to maintain data secrecy must be signed by the students.

2.2 Timing

Good timing is crucial when writing a scientific paper. Therefore, it is advisable to start it in time. Plan enough time for the literature analysis, methodology and the writing of the paper. We also recommend regular consultations with your supervisors in order to avoid extra work due to close coordination.

2.3 Literature research

The starting point of any scientific work is a thorough literature search. The core of the research should be English-language journals that are classified as B, A or A+ in the VHB-Jourqual 3 or are listed on the Financial Times 50. English-language textbooks (i.e. classics or method books) should only be used in exceptional cases. Students at Leibniz University Hannover can access the online and offline resources of the university library free of charge¹. To search for scientific sources, it is best to use Google Scholar (<https://scholar.google.de/>) in combination with the literature management software Zotero (www.zotero.org), which systematically and automatically records sources, saves documents, and backs everything up via a cloud service. Zotero is available for Windows, Mac OS, and Linux, and the free version is sufficiently usable for theses and seminars.

If a suitable source for the respective topic was found, it is recommended to search for further suitable literature by means of the backward search (in the document in the bibliography or at Google Scholar) or forward search (only at Google Scholar). Backward

¹ When a private computer accesses the databases, a VPN connection must be established.

search means to search the cited sources. Forward search means to identify articles that cite the present article. In general, always read and cite the original sources.

3. FORMAL REQUIREMENTS

3.1 Basics

The following guidelines apply in principle to all scientific work. Individual regulations that only apply to Bachelor Theses, Master Theses, or seminar papers are indicated below. Scientific papers can be written in German as well as in English. The same guidelines apply to both forms of work, with a few linguistic exceptions. For example, in English it is good style to use active language and the personal pronouns of the first form singular or plural. In German, a passive form is often chosen and the speaker is not named.

3.2 Layout

Please use the respective template provided for your work. This template uses the following layout. Bachelor Theses, master theses, and seminar papers are to be prepared using Times New Roman font size 12, with 2 line spacing; only the bibliography is to be written in font size 11 with single line spacing. A 2.5 cm (1 inch) margin is to be left blank on each page margin. Furthermore, justified text must be used. The first sentence of each paragraph is indented by 1.25 cm (0.5 inch); In return, no line spacing is set after a paragraph. We recommend that you always work in paragraphs of 8 to 12 lines to improve the structure of your arguments and to make them easier to read. In these paragraphs, an argument can be presented very well without the risk of losing focus.

Bachelor Theses are a maximum of 25 pages (+/-10%) and master theses a maximum of 50 pages (+/-10%). This specification refers to the text, tables, figures, and bibliography. Cover page, title page with executive summary, table of contents, list of figures and abbreviations, appendices and affidavit are counted separately. The scope of

seminar papers depends on the course. Please refer to the appropriate course page for this information. Footnotes are to be in size 10 font with single line spacing and not indented. Page numbers are listed with Arabic numerals at the bottom of the page, right justified. The cover page does not have a page number. All other pages are counted through and given a page number. Differing from this, the table of contents and the title page with abstract should have Roman page numbers. In general, you should try to keep the number of footnotes as low as possible or even do without them altogether. The following rule of thumb applies: Important content should be edited in the text. Unimportant content should be completely omitted. Tables and graphics should be integrated into the text. In order to emphasize certain aspects or to bring their importance to the fore, a part of the text/word can be *italicized*. Please use this formatting sparingly for important or central concepts.

The submission must take place on the last working day of the processing period at the latest. The Bachelor's and Master's theses are to be sent in digital version as .pdf and .docx to the examination office as well as to sekretariat@wa.uni-hannover.de and the respective supervisors. The Office of the Dean of Studies will check whether your thesis has been submitted on time based on the date on which your email was sent.

Furthermore, a printed version must be handed in at the post office box at the Conti-Campus (Königsworther Pl. 1, 30167 Hannover). The post office box is located in the mail room behind the porter's office. Loose sheets will not be accepted. However, the printed version does not necessarily have to be hard-bound; it can be submitted in a loose-leaf binder (also printed on both sides). In the case of empirical work, please also send us your data sets (e.g. questionnaire data, archive data or interview transcripts) and your analysis codes (e.g. the do-file in Stata) by e-mail. On the part of the university, there is a restriction on receiving mail attachments of 100 MB. If the documents are too large to be sent by e-mail, please contact the respective supervisor to find another solution.

Seminar papers will only be submitted in digital form.

3.3 Type and structure of scientific papers

3.3.1 General

The structure of a scientific paper should be logical, free of contradictions and repetitions. It should provide the reader with initial information about the essential content of the work. Each heading in the text must be found again in the table of contents. The respective position in the table of contents must be provided with the corresponding page numbers in the text and match the corresponding headings in the text. A maximum of three outline levels is recommended. In addition, it should be noted that a subordinate bullet point may not stand alone. This means, for example, that a subheading 2.1 must be followed by a subheading 2.2.

3.3.2 Bachelor Thesis

Bachelor Theses are always done as literature reviews. As part of each Bachelor Thesis, propositions are derived. Deviations from these regulations must be agreed upon with the supervisor. Bachelor Theses have the following structure on the top level:

1. Introduction (2-3 pages)
2. Theoretical background (5-10 pages)
3. Propositions (5-10 pages)
4. Discussion (3-5 pages)
5. Conclusion (max. 0,5 pages)

3.3.3 Master thesis

Master theses can be either quantitative or qualitative empirical. Deviations from these regulations must be agreed upon with the supervisors. The two types of Master Theses have the following structure at the top level:

Type A: quantitative-empirical

1. Introduction (3-4 pages)
2. Theoretical background (5-15 pages)
3. Hypotheses (5-10 pages)
4. Methods (4-8 pages)
5. Results (4-8 pages)
6. Discussion (4-8 pages)
7. Conclusion (max. 0,5 pages)

Type B: qualitative-empirical

1. Introduction (3-4 pages)
2. Theoretical background (5-15 pages)
3. Methods (4-8 pages)
4. Findings and Propositions (10-15 pages)
5. Discussion (5-10 pages)
6. Conclusion (max. 0.5 pages)

3.3.4 Text part

In the context of the written elaboration of a scientific paper, it is important to ensure that the wording is precise and comprehensible and that technical language is used. At this point, we would like to recommend once again that you work in paragraphs with a length of 8 to 12 lines. This will improve the structure of your arguments and the readability of the chapters. Please avoid complex sentence constructions (i.e. nested sentences). If you are writing your paper in German, also avoid the "Wir" and "Ich" forms. If the paper is written in English, we and I formulations are common and permissible. Figures and tables belong to the text. Explicit reference to each figure, table, and formula must be made in the text. An intermediate text between superordinate and subordinate heading is possible, if it seems reasonable.

In the *text section*, it is generally important to ensure that the formulation is scientific. This means, in particular for the argumentation, not to string together results/studies of other authors, but to recognize main topics and to link them with each other in terms of content. In addition, central terms should be defined clearly and meaningfully in the paper. A "red thread" must be apparent to the reader.

3.3.5 Abbreviations

Abbreviations should be used as little as possible in the text. Abbreviations of a factual nature commonly used in specialist areas, such as log, SME or R&D, are permitted. When used for the first time, the terms should always be written out and the abbreviation should be mentioned in brackets. In the further course, only the abbreviation is to be used.

3.3.6 Labeling

If figures or tables are used in the text, they must be labeled. Here, figures and tables are to be provided with labels and explanations to the extent that they are understandable in themselves. The figure caption should be listed directly above the figure and marked with "**Figure no.** Title Figure". The table caption also comes above the table and should be prefaced with "**Table no.** Title Table". Figures and tables should be numbered consecutively. In addition, each table or figure must be explicitly referenced in the text. Titles of figures and tables are to be listed in the list of figures or tables with their page number. The lists for the list of figures, tables and abbreviations must be compiled for theses with three entries or more. Figures and tables in the appendix must also be labeled. Captions are to be labeled "**Figure A#.** Title Figure" (example: **Figure A1.** Working time models for university graduates in German companies) or "**Table A#.** Title Table" (example: **Table A1.** Correlation Matrix). Furthermore, figures and tables are to be provided with references as follows:

- Mark the transfer of a figure or table from a source with "Source: Source citation in short title citation".
- Development of a figure or table according to a template mark with "Figure/table in accordance with: Source citation in short title citation style".
- Mark development of own illustrations or tables with "Own illustration".

3.3.7 Formulas

Formulas are to be integrated into the continuous text, in which the explanation of the variables and the context also takes place. The formulas themselves are placed in the center of their own line and are numbered with Arabic numerals in parentheses, right-justified, so that they can be referred to directly in the text.

Example:

The regression is given by the formula

$$y_i = -0,24 + 0,17x_1 - 0,68x_2 + \varepsilon \quad (1)$$

3.3.8 Citations

Our mandatory citation style is based on the Academy of Management (AMJ) citation style. We recommend using the reference management software Zotero (www.zotero.org) where you can load the AMJ style directly from the repository and use it for citations and references. You can access the style guide here: <https://aom.org/research/publishing-with-aom/author-resources/editorial-style-guides>

In case of *indirect quotations*, the text of your reference is not reproduced word-by-word but only with regards to its content in a paraphrased way. The quotation is therefore not stated in quotation marks. However, after the paraphrased quotation the reference is cited in brackets. Based on the location of the reference, the scope of the adoption of content from the reference has to be observable. If several sentences relate to one reference, the reference has to be stated in the first sentence of the paragraph or right

before the end of the relevant sentence. The author's name may be both (1) in the text and (2) part of the parenthesis: (1) As defined by Bandura, Barbaranelli, Caprara, and Pastorelli (1996), this term refers to cognitive processes that, when operating, disengage moral values from overt actions. (2) Harm to the natural environment refers to diminishing the intrinsic value of the physical world (Muehlebach, 2001).

In the case of *literal quotations*, sentences, parts of sentences, terms, etc. are taken over one-to-one in their respective wording and the written language. Quotation marks must be used at the beginning and end of each literal quotation. In addition to the author and year, the page number must be given for verbatim quotations: Such self-regulation, then, is the source of moral agency that causes people to generally "refrain from behaving in ways that violate their moral standards" (Bandura, 1999: 193).

Literal quotations are to be integrated only in the language of the continuous text. A scientific paper written in German should not contain direct English quotations and vice versa. If you still want to quote verbatim, please use a word-for-word translation of the quote in the text and add the original in brackets behind it.

For sources without an author, such as company reports or websites, please choose a meaningful abbreviation: Volkswagen (2021), BASF (2020) or BCG (2019).

3.3.9 Gender-sensitive wording

Inclusion of all genders should be followed to avoid gender discrimination in language. It is accepted to use "they" and the related pronouns even when talking about a word in the singular. They/them is also used for indefinite pronouns in the singular, for example, somebody or nobody.

3.4 Bibliography

The AMJ citation style is also used in the bibliography (Font size 11, single line):

- Bendig, D., Foege, J. N., Endriß, S., & Brettel, M. 2020. The effect of family involvement on innovation outcomes: The moderating role of board social capital. *Journal of Product Innovation Management*, 37(3): 240–272.
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- Schäper, T., Foege, J. N., Nüesch, S., & Schäfer, S. 2021. Determinants of idea sharing in crowdsourcing: Evidence from the automotive industry. *R&D Management*, 51(1): 101–113.
- Schäper, T., Jung, C., Foege, J. N., & Nüesch, S. 2020. Measuring open innovation through textual analysis: An assessment of nonlinear performance implications. *The Proceedings of the International Conference on Information Systems (ICIS)*, published online.

3.5 Affidavit and consent

At the end of each seminar paper, Bachelor or Master Thesis, the author signs an affidavit. This is already part of our format templates. You will also find the text at the end of this document.

4. COMPONENTS OF AN EMPIRICAL-QUANTITATIVE WORK

4.1 Abstract

An abstract is a short section of text that freely summarizes the main features of the scientific work. It describes the basic motivation and question(s) (or hypotheses) and describes the results and possible implications. The abstract must be written in the language used in the paper and must not exceed 150 words. It is not part of the manuscript, but summarizes the manuscript on the title page. The abstract is followed by three to five informative keywords.

Keywords: Theses; seminar papers; specifications; approach; tips;

4.2 Introduction

The *introduction* of a scientific paper serves as an introduction to the respective topic. It is a central component of every scientific paper, since the introduction in particular arouses interest in the paper and provides an overview of its contents. The following points are presented in the introduction: Problem statement, theoretical and practical relevance, objective and research question, results and contribution of the scientific work to the literature. See also "Part 3: Setting the Hook" from the AMJ series "Publishing in AMJ" (Grant & Pollock, 2011). To highlight the scholarly (theoretical) contribution of the paper, it is recommended to look at the document from the SMJ "A practical guide for making theory contributions in strategic management" (Makadok, Burton, & Barney, 2018). This information is also relevant to the theoretical implications (See Discussion section).

4.3 Theoretical background

The theoretical background sets the *conceptual framework*. This serves to introduce and discuss the theories used and the theoretical mechanisms. In this chapter, basic concepts are set and defined. In addition, an embedding of the study in previous considerations and studies is provided. A frequently used element in the theoretical background is a table that provides a systematic overview of the literature to date.

4.4 Hypotheses

In the *hypothesis derivation*, the hypotheses (assertions) to be made in the paper are derived on the basis of theory. For this purpose, the contents from the existing research are linked. For orientation, please refer to the AMJ series document "Part 4: Grounding Hypotheses" (Sparrowe & Mayer, 2011).

4.5 Methods and results

Methods and results are two chapters that are very closely intertwined. The *analysis/methods section* provides information about the (methodological) procedure of the work. The results are also presented descriptively and without interpretation. Thus, a descriptive presentation is given. For further impetus, see "Part 5: Crafting the Methods and Results" from the AMJ series "Publishing in AMJ" (Zhang & Shaw, 2012).

4.6 Discussion

In the *discussion*, the significance of the results is to be interpreted critically and further considerations are to be presented. Here, explanatory approaches for the results are to be provided and these are to be evaluated with regard to the theoretical background. In this context, own considerations of the author should also be included. In addition, the limitations of the own study are to be mentioned. Based on the results, implications for research and practice are to be given. The discussion includes these components: (1) interpretation, (2) theoretical implications, (3) practical implications, (4) limitations & future research. There is also a short commentary on this from the AMJ series "Publishing in AMJ" that addresses the implications, "Part 6: Discussing the Implications" (Geletkanycz & Tepper, 2012).

4.7 Conclusion

Finally, the *conclusion* of your paper follows. This chapter summarizes the main results of your work and the findings from the discussion concisely (0.5 pages). The conclusion is not a summary of the entire paper. Together with the introduction, the conclusion forms the framework of your work. Therefore, no new content is introduced in the conclusion.

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EIGENHÄNDIGKEITSERKLÄRUNG / DECLARATION OF AUTHORSHIP

Name / Name: _____

Vorname / First Name: _____

Matrikelnummer / Matr.-No.: _____

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I hereby declare, that I have written this thesis independently and have not used any sources or aids other than those indicated, that all passages in the thesis which were adopted word-by-word or in spirit from other sources are marked as such and that the thesis has not yet been submitted to any examination authority in the same or a similar form.

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