



INSTITUTE FOR DIGITAL MANAGEMENT  
AND NEW MEDIA

**Directions on scientific studies supervised by  
the Institute for Digital Management and New Media**

Effective: March 2022

## Table of Contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Preliminary note on scientific work .....</b>                  | <b>1</b>  |
| <b>2</b> | <b>Relevant types of scientific theses .....</b>                  | <b>2</b>  |
| 2.1      | Academic studies .....  | 2         |
| 2.2      | Practice-oriented work .....                                      | 3         |
| <b>3</b> | <b>Process .....</b>  | <b>4</b>  |
| 3.1      | Research, writing and supervision .....                           | 4         |
| 3.2      | Submission.....   | 4         |
| <b>4</b> | <b>Formal requirements .....</b>                                  | <b>6</b>  |
| <b>5</b> | <b>Structure .....</b>  | <b>7</b>  |
| <b>6</b> | <b>Title page and directories.....</b>                            | <b>7</b>  |
| <b>7</b> | <b>Text body and citation .....</b>                               | <b>7</b>  |
| 7.1      | Citation.....   | 7         |
| 7.2      | Labelling figures and tables .....                                | 9         |
| 7.3      | Additional remarks in footnotes .....                             | 10        |
| <b>8</b> | <b>Bibliography, appendix and declaration of authorship .....</b> | <b>10</b> |
| 8.1      | Bibliography.....   | 10        |
| 8.2      | Appendix.....   | 11        |
| 8.3      | Declaration of authorship .....                                   | 11        |
| <b>9</b> | <b>Checklist before submission of your work.....</b>              | <b>13</b> |

## 1 Preliminary note on scientific work

Writing scientific papers is an essential part of a scientific study. It serves to familiarize students with the research activity as well as the state of research of a specific research area.

Scientific work raises the claim to make an **own contribution** to research as well as to reappraise the current state of knowledge. In management research, the written contribution is typically composed of **theoretical** and **practical implications**. While theoretical insights address particular existing academic literature, and concrete theories and confirm, refute or expand them, practical recommendations provide relevant recommendations for action for concrete facts and problems in an organizational context.

The specific requirements for scientific work depend on the **level of study** (Bachelor's or Master's degree), the **purpose** of the work (seminar paper, project report or thesis), and the **type** of the study (academic work with or without empirical part, practice-oriented work, work in which a prototype is developed). Despite formal and content requirements of scientific papers, there is also room for differentiation regarding the approach and the specific contents. In the following, **formal** and **content** guidelines are outlined, which have to be considered when writing a scientific paper at the Institute for Digital Management and New Media (DMM).

## 2 Relevant types of scientific theses

As shown in Chapter 1, scientific papers may have different orientations. This also results in deviant procedures, contents and results of such work (see Fig. 1). Typical archetypes of scientific work are briefly explained below. This list is not exhaustive and should only serve as broad guidance. The explicit requirements for a study must be clarified with the supervisor.

### 2.1 Academic studies

- **Objective:** The aim of such a scientific work is an independent contribution to the academic discourse (addressed literature field) as well as to practice (relevant companies). Academic works are measured on the basis of their achieved scientific progress, which can be estimated with the help of the existing literature. Academic studies typically make **cause-and-effect statements** that are not directly action-guiding but rather enable general, abstract insights. Academic work can be differentiated by two different objectives:
  - The **analysis of existing literature** conducted through a **systematic literature review**. Literature reviews are intended to critically examine the current state of knowledge on a particular topic in order to uncover gaps in knowledge and to provide a starting point for future research. They serve to describe, understand, aggregate and explain previous knowledge.
  - An **original contribution** can be created using one of the methods from information systems research (cf. Wilde/Hess 2007<sup>1</sup>). **Empirical methods** include less formalized, qualitative approaches (e.g. qualitative cross-sectional analyzes, case studies, ethnographies) and more formalized, quantitative approaches (e.g. quantitative cross-sectional analyzes, laboratory and field experiments). In addition, **design-oriented methods** can also be used for theses, such as prototyping and action research. **Formal-modelling methods** are rather unusual for theses at the DMM. They include logical-deductive conclusions, for example based on mathematical-formal models, as well as simulations.
- **Approach:**
  - Demonstrate the practical and theoretical relevance of the topic as well as a suitable research gap with the research question.

---

<sup>1</sup> Wilde, T., & Hess, T. (2007). Forschungsmethoden der Wirtschaftsinformatik. *Wirtschaftsinformatik*, 49(4), 280-287.

- Embed the topic in a theoretical framework and select and apply a suitable research approach (e.g. not empirical: literature review, empirical: qualitative or quantitative). In each case an explanation for the use of the chosen theory or method is required.
- Present and discuss the results.
- **Concrete results:** Theoretical implications and practical recommendations for action.

## 2.2 Practice-oriented work

- **Objective:** The aim of such work is also an independent contribution to the academic discourse (addressed literature field) as well as to practice. In contrast to academic studies, the focus here is much more on the practical relevance of the results. Practice-oriented work is measured by its influence in practice. Here, the basis of valuation is more difficult to define, since the state of the art is often not fully worked up in the literature. Practice-oriented works typically make practically relevant statements explaining **target-means relationships**; i.e. describe what needs to be done to achieve a defined goal.
- **Approach:**
  - Demonstrate the practical and theoretical relevance of the topic as well as the description of a suitable research gap with an associated research question.
  - Embed the topic in a theoretical framework and select and apply a suitable research approach (e.g. not empirical: literature review, empirical: qualitative or quantitative). In each case an explanation for the use of the chosen theory or method is required.
  - Convincing presentation and discussion of the results with a focus on the practical relevance of the results and the aim of deriving concrete recommendations for action.
- **Concrete results:** (Theoretical implications) and practical recommendations for action.

## 3 Process

### 3.1 Research, writing and supervision

- Following a literature review and familiarization with the topic, the structure of the work should be discussed with the supervisor.
- In the case of group work, a **spokesperson** should be appointed who is the primary supervisor.
- Discuss the **consultation of third parties** (e.g. companies, authorities, other chairs, ...) with your supervisor if applicable.
- **Supervising a thesis (Bachelor's and Master's degree):**
  - The number of theses accepted for supervision depends on the current capacity of the institute, whereby usually applicants are favored for
    - bachelor theses, if they scored 2.3 or better in one of our two main seminars ('Hausarbeitenseminar mit wechselnden Themen' or Hauptseminar 'Empirische Studien zu Neue Medien'),
    - master theses, if they scored 2.3 or better in the courses "Digitalization, Transformation and Management" or "Managing Digital Media"
  - Personal consultation with the potential supervisor and the preparation of a first rough outline and an exposé.
  - If applicable, together with the supervisor, the topic will be presented during the consultation with Prof. Hess (after previous appointment).
  - Completed registration forms are handed in to the DMM secretary digitally.
  - The duration of the study depends on the respective degree program. Typical durations for BA studies are (on a calendar day basis):
    - Seminar papers: as specified by the supervisor
    - Bachelor thesis: 8 weeks
    - Master thesis: 22 weeks
  - Approximately every two weeks a colloquium event takes place, for which attendance is obligatory for the graduate candidates over the duration of their study. The relevant dates will be announced by the supervisor or the secretary.
  - After about half the writing time, the candidate presents the current state of work in a 15-minute presentation followed by a 10-minute discussion in the colloquium.

### 3.2 Submission

- Unless explicitly stated otherwise, all papers written at the DMM must be submitted to the secretariat of the institute by 12:00 noon on the day of submission. The secretariat is in room 213a, Ludwigstr. 28, front building.

- 
- **Seminar papers**
    - Data medium (e.g. CD or USB stick) with the paper in digital format as Word (.doc/.docx) and PDF document (.pdf) together with any necessary digital attachments. The Word and PDF document must also be send by e-mail to the supervisor. Additional printed versions can be requested by the supervisor.
  - **Bachelor and master thesis**
    - Submission in line with the regulations at the ISC, Ludwigstr. 28 VG, room 023 (note opening times and current rules regarding submission). Additionally, in digital form as Word- (.doc/.docx) and PDF-document (.pdf) on a data medium together with possibly necessary digital attachments as well as by E-Mail (Word- and PDF-document) to the supervisor.
  - For all works written at the DMM, the following files must be submitted on a data medium (also in duplicate or in triplicate):
    - All sources used as .pdf. (When creating the .pdf files from online sources, note that in the print settings of your browser, the options for printing the URL as well as the current dates are activated).
    - Books available in the associated libraries (0500, 0501, 1004, 1006) do not have to be scanned as .pdf. All sources, if available in digital form, must be linked in the EndNote library (see also "Formal requirements").
    - For all empirical work (qualitative and quantitative), all data and scripts used must be submitted. This includes, in particular, audio recordings of interviews (as MP3), written transcripts of interviews, original data records from surveys as well as input and output files of all data processing carried out (e.g. with SPSS, smartPLS, Excel, etc.). As a guideline, the respective supervisor must be able to fully understand the results given in the work based on the submitted data.

## 4 Formal requirements

- For all seminar papers and theses, the template for Microsoft Word offered on the homepage of the chair is to be used. Each student can work in the CIP pools of the faculty to use Microsoft Word. If other word processing systems are preferred (e.g. latex, etc.), this must be approved in advance by the supervisor. In this case, it must be ensured by the student that the formatting in all details is equivalent to the provided Word template.
- When writing your thesis, it is essential to work with **stylesheets** and **automatic directories** (for illustrations and tables of contents) and the functions for **image captions**, **footnotes** and **cross-references**.
- The literature sources are to be managed with EndNote. Every LMU student has the option of obtaining a full version of the program at <http://www.ub.uni-muenchen.de/schreiben/literaturverwaltung/endnote/index.html> free of charge. For download you must be logged into the LRZ network (VPN client).
- Specifications on the scope of the papers and theses can be found in the respective study regulations:
  - BWL: <https://www.isc.uni-muenchen.de/studiengaenge/index.html>
  - MMT: [https://www.mmt.bwl.uni-muenchen.de/current\\_students/regulations/index.html](https://www.mmt.bwl.uni-muenchen.de/current_students/regulations/index.html)
- These specifications must be adhered to. Deviations of more than  $\pm 10\%$  have a negative effect on the evaluation.
- The **formatting** of the entire document results from the provided Word template (see above). The formatting preset in the template cannot be changed.
- If you separate a word **manually**, use the **conditional hyphen** by using the combination "Ctrl" + "-". This has the advantage that it disappears again, if the separation changes due to changes in the text.



## 5 Structure

- The structure of your study as well as the topic should be substantiated well. A new outline level should not be inserted unless it consists of at least two bullet points. The topic of the thesis should not be completely recurred in one bullet point.
- Pay attention to a **common thread** in your work. Start by pinpointing the objective of the work and checking in your summary if the goals could be achieved. Over the course of the study, it should always be clear to which goal your argument is working.
- Only treat **basics** that are needed and taken up again in the study. Introduction and basics should normally not account for more than 30% of the volume.
- The structure must be numeric. Between each number one point appears. After the last digit, there is no point (e.g. 3.2.4)
- In the table of contents, please specify with pages:
  - If necessary, list of figures
  - If necessary, list of tables
  - If necessary, list of abbreviations
  - Structure of the text
  - Bibliography
  - If necessary, appendix
- If several separable aspects are mentioned in one section, they should be distinguished from each other by paragraphs.
- The numbering of the entire work is carried out consecutively with Arabic numbers. If necessary, the page numbering will continue unchanged in the appendix.
- You will find an exemplary outline in the provided Word template.

## 6 Title page and directories

Examples for title pages of seminar papers and theses can be found in the provided Word templates. Important: The title page of the thesis must be adapted to the study program of the student who is working on it.

## 7 Text body and citation

The formatting of the work is entirely based on the Word template provided and must not be changed.

### 7.1 Citation

- For the citation within the work and the bibliography, use the functions of EndNote and an EndNote library you have created, which must be handed in

---

later together with the work. Please use the EndNote style, which is part of the Word template and is available for download via the institute's website.

- For all scientific studies at the DMM, **citations** in the text must be used. Usually at the end of the sentence or phrase the authors, the year of publication and the exact page number within the source are stated in parentheses. **Literal citations** are to be marked by quotation marks and italics. With regard to the **page reference**, the citation of a page (or a sentence, section) must specify the exact page number (e.g. Hess et al. 2011, p. 215; for several pages the exact range Hess et al. 2011, p. 215-227).
- A quote without specification of the exact page is only permitted if the overall statement of a scientific contribution is to be referenced. If information about the author or year is not known, these are replaced by "w/o a."(without author), or "w/o yr."(without year). In the case of (consulting) studies, practical contributions or journal articles, the names of the commissioning companies, institutions or magazines may be given instead of the author.
- The full description of the source is given in the bibliography. If an author cites several sources that appeared in the same year, a lowercase letter is added to the year of publication (e.g. Mustermann et al. 2017a).
- **Online sources** should be handled just as books or magazines. The year refers to the publication of the article on the Internet. Page references are not necessary for online sources. Example: An article by Franz Beckenbauer on the web page of FC Bayern Munich from the year 2007 should be quoted: "Mia san mia" (Beckenbauer 2007).
- Please note that in any case despite the automatic administration of the sources and citations with EndNote and Microsoft Word **you must ensure that all citations are correctly marked and all sources including all necessary information (see below) are listed in full in the bibliography.**

## 7.2 Labelling figures and tables

Figures or tables are provided to illustrate the facts presented. If figures or tables are inserted, they must be mentioned in the text. The labeling of tables and figures must be formatted according to the examples in the supplied Word template. Regardless of this, the following guidelines must always be adhered to:

- The labeling is **centered below** the graph or table with the addition "Fig." Or "Tab." In the form:

Fig. [chapter number first level]-[consecutive number]: [title of the figure]

e.g.:

Fig. 3-2: Model of Illustrations

or

Tab. 4-7: Elements of good Illustrations

- The numbering of figures and tables starts again at "1" in each first-level chapter.

e.g.:

Fig. 3-2: Model of Illustrations

and

Fig. 4-1: Classification in the Final System

- Sources for figures and tables are given directly in the label:

e.g.:

Fig. 3-2: Model of Illustrations (Meier 1911, p. 34.)

- All figures and tables must be listed in a list of illustrations and, if applicable, in a separate list of tables. These are inserted after the table of contents.

### 7.3 Additional remarks in footnotes

It is useful to present situations that are not necessarily required to understand the text in footnotes. Examples include:

- Clarification of individual terms, contextual delimitation and definition: e.g. in the text: "... the safety<sup>1</sup> of modern information systems..."; in the footnote: <sup>1</sup> Safety is used in the sense of "security" here.
- Short examples and numbers: e.g. in the text: "... the most popular combination of subjects<sup>1</sup> in in the study program information systems ..."; in the footnote: <sup>1</sup> The most popular combination of subjects according to a survey with 2.000 students of information systems is statistics with management (source).
- Further explanations, mathematical proofs etc.: e.g. in the text: "... the equation can be solved with the p-q-formula<sup>1</sup> ..."; in the footnote: <sup>1</sup> The p-q-formula is a general procedure for the determination of zeros of second-order polynomials.

## 8 Bibliography, appendix and declaration of authorship

### 8.1 Bibliography

- At the end of the study, a bibliography should be added, in which all cited literature is listed. This is largely automatically created when EndNote is used correctly. It is important to ensure that the correct type of reference is specified in Endnote (e.g. "Book", "Book Section", etc.). If you want to use a reference type that is not provided in the default endnote style, you must insert a corresponding template for this reference type in the style. The supervisor of the thesis may be able to assist with the issue.
- The bibliography must be sorted alphabetically by author name.
- All resources must be completely specified via the source management in EndNote. This includes in particular:
  - For **Books**: authors (last name and at least initial letters of the first names), year of publication, title, possibly edition and place.
  - For **anthology contributions**: For anthologies the referenced section must always be directly referenced ("Book Section") and not only the anthology itself. Therefore, the following information is required: authors (last name and at least initial letters of the first name), year of publication and title of the article, titles and authors (last name and at least initial letters of the first name) of the anthology, page numbers within the anthology, if necessary edition, place.
  - For **journals**: authors (last name and min. initial letters of the first names), year of publication, title, title of the journal, year, number, page numbers.

- 
- For **conference papers**: authors (last name and at least initials of the first names), year of publication, title, conference name, location of the conference, if necessary page numbers.
  - For **online sources**: authors (last name and at least initials of the first names), year of retrieval, URL, exact retrieval date, if necessary special hints such as limited access.
  - Examples of corresponding entries in the bibliography can be found in the provided Word template.
  - Hints for the selection of Sources:
    - The VHB Jourqual Ranking (<https://www.vhbonline.org/en/vhb4you/vhb-jourqual/vhb-jourqual-3/tables-for-download>) serves as an indicator of the quality of sources and is intended for business administration outlets.
    - The "Basket of Eight" (<https://aisnet.org/?SeniorScholarBasket>) journals and in addition (for information systems research) also the ...CIS Conferences, are considered reliable sources for IS publications.
    - Specific sources (highly specialized conferences and analogue journals) should also be taken into consideration.

## 8.2 Appendix

- An appendix may be added if required.
- For very detailed appendices, a list of appendices may be inserted on the first page of the appendix.
- The inscription of figures and tables in the appendix follow the same pattern as in the text (see section 7.2), replacing the number of the first level with an "A".
  - E.g.: Fig. A-2
- Figures and tables in the appendix will not be included in the list of figures and tables at the beginning of the paper.

## 8.3 Declaration of authorship

For theses a declaration of authorship is inserted after the appendix as last page in accordance with the following template.

|   |
|---|
| <p><b>Ehrenwörtliche Erklärung</b></p> <p>Ich erkläre hiermit ehrenwörtlich, dass ich die vorliegende Arbeit selbstständig angefertigt habe; die aus fremden Quellen direkt oder indirekt übernommenen Gedanken sind als solche kenntlich gemacht.</p> <p>Die Arbeit wurde bisher keiner anderen Prüfungsbehörde vorgelegt und auch noch nicht veröffentlicht.</p> <p>München, den 01. Januar 2021</p> <p>_____</p> <p>(Unterschrift)</p> |
|---|

*Fig. 8-1: Template for declaration of authorship*

**Translation of the declaration of authorship:**

I hereby declare that this work was written by myself, all directly or indirectly adopted thoughts from other sources were marked as such.

Until now the thesis was not handed in at any other institution and is not published.

Munich, 1<sup>st</sup> of January 2021

\_\_\_\_\_

(Signature)

---

## 9 Checklist before submission of your work

- Correct typeface and margins, even with page numbers and footnotes?
- List of figures and abbreviations correct?
- Correct use of the EndNote features, as well as linking the literature in the EndNote library?
- Sources and bibliography correctly formatted and complete?
- If needed, additional printed version as requested by the supervisor?
- Data medium with: (1) study as .doc/.docx and .pdf, (2) all sources as .pdf, (3) EndNote library and (4) any additional digital attachments required (e.g. audio recordings, records, statistics scripts, etc.)?
- Additionally sent by e-mail to supervisor?