



**Publication Manual for
Diploma, Study, Seminar, Bachelor and Master Theses**

**at the
Chair of Information Systems I – Innovation and Value Creation
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1 Introduction

This publication manual may help you to write a scientific thesis at the Chair of Information Systems I – Innovation and Value Creation. To make our supervision and review of your thesis easier, we expect you to comply with the conventions given in this manual and would appreciate that you read everything very carefully¹.

2 Procedures

2.1 Handling the literature

2.1.1 What kind of literature?

We expect you to know well and be able to classify the scientific literature of your topic. That primarily comprises publications of relevant journals, which have high quality standards due to so-called “double-blind reviewing”. Journal rankings, like the VHB Journal Ranking or the WKWI orientation list for journals, inform you about the impact of a single journal in the scientific world. Papers in “A”-journals are more valuable than papers in “C”-journals. These rankings may give you a first orientation, but nonetheless you have to decide on your own, if papers from other authors are relevant for your thesis, regardless from whom or where these papers were published.

Additionally to scientific papers, dissertations can function as an important source for recent research results as well. Textbooks may help you with both, introducing yourself into the topic of your thesis and structuring it provisionally.

2.1.2 How many references are sufficient?

The challenge of writing a scientific thesis is to find the relevant references on your topic. Usually, you will find them in reviewed journals rather than in general book chapters. We do not rate the quantity of your reference entries, but their quality. That means that we pay high attention to the relevance and impact of the cited references within your topic, while evaluating your thesis. Therefore, we absolutely recommend you to be familiar with the respective databases (Business Source Complete, ABI/Inform). The university library regularly offers training courses in how to use these databases more efficiently. If you never attended such a course, we highly recommend you to join one.

In order to support you at the very beginning of your thesis, we commonly provide you with initial literature recommendations, which should be understood as neither complete nor mandatory.

2.1.3 What must be part of the reference list?

Every reference you have cited in your thesis must be listed up in your references, and vice versa, every reference list entry must be cited in your narrative – but please, nothing more! Please do not list up references that only deal slightly with your topic, but are not crucial for your thesis at all.

¹ This manual is based on the conventions for scientific research at the Chair for Service and Technology Marketing (Prof. Florian von Wangenheim) at the Business School of TU Munich, Germany. We would like to sincerely thank Prof. von Wangenheim for providing us his guideline and want to point out that several sentences in this manual are adopted after consulting Prof. von Wangenheim.

2.2 Writing your thesis

2.2.1 General advice

To get a first idea of which standards a paper has to fulfill, we recommend you to analyze the structure and the outline of dissertations in the field of business administration (e.g. available in Deutscher Universitätsverlag).

We advise you to prepare an outline, as soon as you decide to start the research on a topic (that usually has to be updated before submission). By outlining a structure, you will see if you can keep up your argumentation from the very beginning to the end. Since it serves as the basis for submitting your thesis, you will have to discuss the structure with your advisor.

Although it seems that there is nothing worse than deleting text you have already written, we strongly recommend you to start writing on your thesis as soon as possible. On the one hand, it could happen that you have to delete written passages, but on the other hand it helps you to realize that you have understood contexts, and that your planned structure is suitable for your thesis.

2.2.2 Language and style

By getting used to scientific literature, you will recognize the objective scientific reporting style. Stylistic blunders, irony or sarcasm are inappropriate. You are allowed and very welcome to foster your own writing style, as long as you try to reduce bias in your language. Thus, try to describe as specific as possible, but only mention information or differences that are relevant for your argumentation.

A great variety of mistakes in spelling, grammar or format gives a bad impression and negatively effects your evaluation. Since you get stuck in a rut working with your thesis for a while, we would advise you to let other persons proofread your texts. According to our experience, it is always amazing how many tiny mistakes are found by other people, though you feel certain that you have already corrected every mistake. Try to reserve enough time for this important step before submitting your thesis. Imagine: Would you like to correct more than 40 pages for a good friend just one night before submission?

2.2.3 Tables and figures

The aim of tables and figures is to substantiate and visualize what you are describing in your thesis, thus, they have to be integrated into the narrative. A set of tables or figures, which is not explained thoroughly or do only loosely fit with the content of your text, is more confusing than helpful. Interesting additional information that is not discussed in extension within your thesis should be moved to the appendix.

You can either design tables and figures on your own or copy them from other authors (but then always cite correctly!). Tables and figures should always be comprehensible for your reader. Hence, pay special attention to the design process so that the reader can easily extract the general information out of your graphics. You get a detailed insight of “what is generally common” by comparing the figures and tables of journal articles.

2.3 English or German?

You can write your thesis either in English or German. The positive effect of writing your thesis in a foreign language might not be obvious at first glance, but we would like to point out the following arguments:

First, due to globalization, you have to write more and more documents in English. By drawing up your thesis in English, you can prove that you are able to express yourself in business and scientific language, while you simultaneously increase your possible audience considerably.

Second, in the course of your literature research you will recognize that the relevant literature is primarily written in English, thus you surely have to work with English terminology and language anyway.

3 Thesis format

3.1 Number of pages (exclusive title page, table of contents, appendix and references)

As long as your advisor does not explicitly specify the extent of your paper, we expect the following (including graphics and tables):

- Seminar Thesis: 15 pages +/- 1
- Study Thesis: 30 – 40 pages
- Bachelor Thesis: 30 – 40 Pages
- Master Thesis: 60 – 80 Pages
- Diploma Thesis: 60 – 80 Pages

3.2 Thesis structure

- Title page, abstract, table of contents, list of figures, list of tables, and list of abbreviations
- Text with figures and tables
- References, affirmation, if necessary list of appendices and appendix

3.3 Typeface and text formats

- Times New Roman or Arial, 1.5 line spacing, 12 pt.
- Margins:
 - Left margin: 4 cm (so that the thesis can be bound)
 - Right margin: 2.5 cm
 - Top and bottom: 2.5 cm
- Footnotes: single line spacing, 10 pt .

3.4 Citations

Please do only use the citation and format conventions of the *APA style* (more details in the appendix, chapter 5.4).

You make things easier for yourself if you start working with a reference management program as soon as possible. We therefore recommend Mendeley. It helps you gather and organize relevant citations and insert them into text passages.

You can download the software for free (www.mendeley.com).

Do only use in-text citations. Two different kinds of in-text citations are possible:

- Direct citation (fewer than 40 words, use rarely): Reproduce the content of the reference word for word in double quotation marks. Add the author, year, and the specific page in parentheses.
Example: It is said: "The ball is round" (Herberger 1954: 235).
- Indirect citation: You reproduce the content of the reference(s) in your own words. Then add the year in parentheses right after the author.
Example 1: Herberger (1954) once said that the ball was round.
Example 2: We can state that the ball is round (Herberger, 1954).

Direct citations should only be used if the cited author is describing something very explicitly. Apart from that, the aim of indirect citations is to show that you do not just copy, but are able to classify and assess different sources of information within your topic.

4 Content structure of your thesis

4.1 Structure

Usually, our chair assigns empirical-based papers. For non-empirical issues (e.g. for seminar or study thesis), following conventions must be adapted accordingly.

An exemplary empirical thesis consists of:

- Introduction
- Conceptual and Theoretical Foundation
- Research Design (or Methods)
- Empirical Results
- Discussion of Results
- Conclusion/Summary

4.2 Outline

A thoroughly planned outline is the essential part of a successful scientific thesis. Since an unstructured thesis barely has a chance to get a good grade, please appreciate our advice:

The outline should be balanced according to the relevance of the different issues of your thesis' topic. The length of text should correlate with the importance of the aspect. That usually implies that chapters get more extensive up to the empiric part of your thesis and that the discussion of your results comprises at least 5 – 10 % of your thesis. The story should be comprehensible from the outline. Chapters should build on one another.

Subchapters are not independent from one another. That means, you only use a chapter "2.2.1", if at least a chapter "2.2.2" is following.

If you have several subchapters (e.g. "2.2.1" / "2.2.2" / "2.2.3") within a major chapter (e.g. "2.2"), do only shortly introduce your major chapter to the following subchapters, and try to keep your introduction as concise as possible.

4.3 Basic information for the single chapters of your thesis

4.3.1 Abstract

An abstract provides a brief overview of your thesis within half a page. It outlines the entire thesis (overview of your topic, methods, results, implications, and/or concluding statement).

4.3.2 Introduction

The introduction comprises of the research question (mostly "1.1") and the objectives as well as the structure of your thesis (either "1.2", or "1.2" and "1.3", if the objectives and the structure are discussed separately).

The aim of your introduction is to explain why it is necessary to discuss your topic scientifically. You can reach this by:

- referring to the relevance of your topic for operational business, and/or
- referring to the actuality of your topic in the scientific world.

Please confirm both explanations using to respective citations.

After you have explained the need for research in your field of interest, you have to clearly define clearly the objectives of your thesis in a next step. Even if your thesis might be tremendous, you cannot answer every question that is arising from your research question within your thesis. Thus, you have to specify your general research question to distinct objectives as concrete as possible. Hence, please consider while you are writing your thesis, that your work will be evaluated according to your announced objectives and always ask yourself if every single text passage is really helpful to accomplish your objectives.

4.3.3 Conceptual and Theoretical Foundations

In this chapter you want to provide an overview of the essential concepts and theories in order to give the reader a better understanding of your thesis. To avoid confusion, it is usually sufficient to introduce two to three different definitions of your essential concepts, and then reason why you choose one of them. Furthermore, you should limit yourself to present only the most relevant theories. Regardless which theory or which definition you choose, do not forget that you have to set clear objectives for yourself. A simple test (by asking yourself: "Does this definition / theory help, to achieve my goals?") will help you to decide if it is necessary to integrate an aspect or to dispatch it.

4.3.4 Research Design

The disquisition of your research design depends on your chosen research strategy. The aim of this chapter is to prove that you can derive correlations and connections between existing theories and previous research findings. In certain circumstances it might happen that you struggle with contradictory theories, which you should integrate convincingly and logically into your research model. By developing your research model, respectively establishing premises or hypothesis, you concretize your research question. Since this chapter serves as a basis for your empirical part, you have to elaborate and confirm your argumentation profoundly and scientifically. Before you start collecting data, please let your advisor review this chapter. This is necessary to confirm that all important aspects are included. It is difficult, if not impossible to make major adjustments while or after you collected your data.

4.3.5 Empirical Results

In this chapter you have to present both, your collected data (by sharing your research settings, research design, interview guidelines, surveys, timeframes, dates etc.) and your data analyses as comprehensible as possible. To achieve this, always consider the rule of thumb of "better delivering too much information than too less", but in discussing your results, please remind yourself of the objectives of your thesis, before you present every possible analysis or aspect of your data collected.

4.3.6 Discussion of Results

Even though sometimes being disregarded, the discussion is a vital part of your thesis. While you presented your results in the empirical part based on facts, you now have the chance to both, emphasize the impact of your thesis and highlight new aspects as well as implications of the topic you have elaborated. To meet the requirements of both target groups (scientists and practitioners), it would now make sense to divide this chapter into a scientific and a management oriented discussion. The aim of the scientific discussion is to underline how far your results help closing existing research gaps and provide new insights. The management oriented discussion should stress which measures practitioner should take into account according to your results.

4.3.7 Conclusion / Summary

In your conclusion (or summary) you summarize the *most relevant results* of your thesis (do not write a whole summary of your thesis or methods!). Hence, you can outline the need for further research, for instance that it would be interesting to either continue research efforts in your topic, or proceed analyzing potentially open aspects, which you did not focus in your thesis.

4.4 An advice on your own behalf: Plagiarism

Of course, we assume that you behave correctly while writing your thesis. Nevertheless, we want to point out the possible consequences of inappropriate behavior.

Your thesis or paper is a scientific work that should not only comply with scientific standards regarding methods and verifiable transparency, but also regarding ethical and moral values. The worst behavior in the scientific world is *plagiarism*.

Beyond any doubt, it is nowadays very easy to find a thematically similar thesis with the help of search engines, online data bases, etc. Do immediately refuse any temptation to adopt the thoughts of someone else for your own purposes! It is still your own work. If you consider the scientific work of someone else as relevant for your own thesis, declare it according to the citation conventions given in chapter 3.4.. Furthermore, we can predict that your advisor is very familiar with reading scientific literature, and thus will immediately detect any deviations in your writing style.

Plagiarism is not a trivial offense, actually: It can invalidate your thesis, and consequently dispossess you from your academic degree!

5 Additional information

5.1 Course assignments

If no contrary information is provided by your advisor, you have to submit two hardback and one electronic copy of your assignment to our secretaries' office within the period prescribed.

5.2 Bachelor thesis

Please note that you have to submit two hardback and one electronic copy of your thesis to the "Prüfungsamt" within the prescribed period. If you send the thesis via mail (not e-mail) the post mark has to be in due time. Please consider opening hours.

5.3 Master thesis

Please note that you have to submit two hardback and one electronic copy of your thesis to the "Prüfungsamt" within the prescribed period. If you send the thesis via mail (not e-mail) the post mark has to be in due time. Please consider opening hours.

6 Sample

6.1 Sample title page of a master thesis

(Please use the appropriate degree and wording for your thesis)



TITLE

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF**

MASTER OF SCIENCE

(Insert the appropriate degree)

IN

INFORMATION SYSTEMS

(Insert your study subjects)

WITH SPECIALIZATION IN INDUSTRIAL INFORMATION SYSTEMS

(Insert your specializations, if available)

AT

FRIEDRICH-ALEXANDER-UNIVERSITY ERLANGEN-NUERNBERG

Submitted by: *Surname, Given Name(s)*
Student ID: *1234567*
Subject: Information Systems
Professor: Prof. Dr. Kathrin M. Moeslein
Advisor: *Surname, Given Name(s)*
Period: MM.DD.20JJ to MM.DD.20JJ

Friedrich-Alexander-University Erlangen-Nuremberg
Chair of Information Systems I – Innovation and Value Creation
Lange Gasse 20, 90403 Nuremberg, www.wi1.uni-erlangen.de

6.2 Sample title page for a study thesis



TITLE

Study Thesis

Submitted by: *Surname, Given Name(s)*
Student ID: *1234567*
Professor: Prof. Dr. Kathrin M. Moeslein
Advisor: *Surname, Given Name(s)*
Period MM.DD.20JJ to MM.DD.20JJ

Friedrich-Alexander-University Erlangen-Nuremberg
Chair of Information Systems I – Innovation and Value Creation
Lange Gasse 20, 90403 Nuremberg, www.wi1.uni-erlangen.de

6.3 Versicherung (to be attached in German)

Versicherung

Ich versichere, dass ich die Arbeit ohne fremde Hilfe und ohne Benutzung anderer als der angegebenen Quellen angefertigt habe und dass die Arbeit in gleicher oder ähnlicher Form noch keiner anderen Prüfungsbehörde vorgelegen hat und von dieser als Teil einer Prüfungsleistung angenommen wurde. Alle Ausführungen, die wörtlich oder sinngemäß übernommen wurden, sind als solche gekennzeichnet.

Nürnberg, den MM.DD.20JJ

Unterschrift des Autors

6.4 Citation conventions

Citations and references have to be formatted according to the American Psychological Association public manual (5.ed) (please see: APA, 2001).

Reference tools can help you to complete and format citations and your reference list, but they are no guarantee for accuracy. Thus you will have to manually verify your citations and references.

Reference Citations in Text

The examples (italic text) are taken from the 5th edition of the APA Style Guide, published in 2001.

Within the text, surname(s) of the author(s) and year of publication of referenced sources should be given:

- one author
 - *Walker (2000) compared reaction times*
 - *In a recent study of reaction times (Walker, 2000)*
 - *In 2000 Walker compared reaction times (acceptable but not preferred)*
- two authors
 - cite both names every time they occur
 - *Wasserstein, Zappula (1994)*
- three, four or five authors
 - cite all authors the first time the reference occurs, then only cite the first name and add “et al.”
 - first occurrence: *Wasserstein, Zappulla, Rosen, Gerstman and Rock (1994)*
 - subsequent occurrence: *Wasserstein et al. (1994)*
- six or more authors: cite only the surname of the first author followed by “et al.”
- differentiating multiple authors after shortening:
 - If you cite multiple authors and the citations would not be specifiable after shortening, use as many authors name as necessary.
 - *Kosslyn, Koenig, Barrett, et al. (1996) and Kosslyn, Koenig, Gabrieli, et al. (1996)*
- groups of authors, e.g. companies or government agencies
 - usually spelled out each time they occur
 - if still identifiable without difficulty: long names can be shortened after the first occurrence
 - first occurrence: *(National Institute of Mental Health [NIMH], 1999)*
 - then: *(NIMH, 1999)*
- specific pages cited: *(Check & Buss, p. 323) or (Check & Buss, pp. 323-347)*
- multiple citations from same author(s) within the same year
 - add the suffixes a, b, c, and so forth after the year
 - *(Johnson, 1991a)*
 - *(Johnson, 1991b)*

More exceptions can be found in the APA Publication Manual (pp. 207 ff.).

Reference List

References are your entries in the *alphabetical list at the end* of your assignment or research thesis. This list should include only work you have cited.

Alphabetize references by the last name of a sole author, a first author, or an editor, or by the name of a corporate author (for instance, U.S. Census Bureau) or periodical (such as the *Wall Street Journal*) if there is no human author or editor. Order works by an identical author by year of publication, listing the *earliest first*. If the years of publication are also the same, differentiate entries by adding small letters (“a,” “b,” etc.) after the years. Repeat the author’s name for each entry.

Generally, the edition has to be cited, with the exception of the first edition.

More information can be found in the APA Publication Manual (pp. 215 ff.)

Referencing **books**

Follow this form: Last names, initials (separated by a space) (Year). *Title* (italic, capitalize *only the first letter* of the first word and of the first word of the subtitle) City where published: Name of publisher. (Give the name of the city and (if not well known or not unique, add country after a comma)

Last name, Initials. (Year). *Book title: Subtitle*. (Edition) [if other than the 1st]. Location: Publisher.

Examples:

Granovetter, M. S. (1965). *Getting a job: A study of contracts and careers*. Chicago: University of Chicago Press.

Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: Wiley.

National Center for Education Statistics. (1992). *Digest of education statistics*. Washington DC: National Center for Education Statistics.

Referencing **periodicals**

Last names, initials. (Year). Title. *Title of Periodical*, volume number (issue number, *if needed—see below*), page number(s).

Examples:

Shrivastava, P. (1995). The role of corporations in achieving ecological sustainability. *Academy of Management Review*, 20, 936–960.

Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*, 69(6), 96–104.

Include an issue number *only if every* issue of the referenced periodical begins with a page numbered 1. (Look at more than one issue to check.) If an article has no author, the periodical is referenced.

Examples:

BusinessWeek. (1998, October 19). The best B-schools, 86–94.

Harvard Business Review. (2003). How are we doing? 81(4), 3.

Chapters in books, including annuals.

Authors' last names, initials. (Year). Title of chapter. In Editors' initials and last names (Eds.), *Title of book* (pp. Page numbers). City: Publisher.

If the book was published by several authors, use "Eds." instead of "Ed."

Examples:

Levitt, B., & March, J. G. (1988). Organizational learning. In W. R. Scott & J. F. Short (Eds.), *Annual review of sociology*, 14, (pp. 319–340). Palo Alto, CA: Annual Reviews.

Dutton, J., Bartunek, J., & Gersick, C. 1996. Growing a personal, professional collaboration. In P. Frost & S. Taylor (Eds.), *Rhythms of academic life* (pp. 239–248). London: Sage.

Unpublished works. These include working papers, dissertations, and papers presented at meetings.

Authors' last names, initials. (Year). *Title*. Additional information on missing publication. City.

Examples:

Duncan, R. G. (1971). *Multiple decision-making structures in adapting to environmental uncertainty*. Working paper no. 54–71, Northwestern University Graduate School of Management, Evanston, IL.

Smith, M. H. (1980). *A multidimensional approach to individual differences in empathy*. Unpublished doctoral dissertation, University of Texas, Austin.

Wall, J. P. (1983). *Work and nonwork correlates of the career plateau*. Paper presented at the annual meeting of the Academy of Management, Dallas.

Electronic documents.

Authors' last names, initials. (Year, Month Day). *Title*. Retrieved Month Day, Year, from source.

Example:

Carrington, D. (2011, April 11). *BritNed power cable boosts hopes for European supergrid*. Retrieved April 11, 2011, from <http://www.guardian.co.uk/environment/2011/apr/11/uk-netherlands-power-cable-britned>.

6.5 Example of a reference list

Alderfer, C.P. (1976). Boundary relations and organisational diagnosis. In M. Meltzer & F. Wickert (Eds.), *Humanizing organisational behavior* (pp. 142-175). Springfield, Ill.: Charles Thomas.

Allen, T. (1977). *Managing the flow of technology*. MIT Press, Cambridge, MA.

American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5. ed.). Washington, D.C.: American Psychological Association.

- Ancona, D. (1990). Outward bound: Strategies for team survival in an organisation. *Academy of Management Journal*, 33, 334-365.
- Ancona, D. & Caldwell, D. (1992). Bridging the boundary: External activity and performance in organisational teams. *Administrative Science Quarterly*, 37, 634-665.
- Ancona, D. (1993). The classics and the contemporary: A new blend of small group theory. In J.K. Murnighan (Ed.), *Social psychology in organisations: Advances in theory and research* (pp. 225-243). New York: Prentice-Hall.
- Argote, L., McEvily, B., Reagans, R. (2003). Managing knowledge in organisations: Creating, retaining and transferring knowledge. *Management Science*, 49 (4), v-viii.
- Argote, L., Ingram, P., Levine, J., & Moreland, R. (2000). *Knowledge transfer in organisations. Organ. Behavior Human Decision Processes*, 82 (1), 1-8.
- Beal, D.J., Cohen, R. R., Burke, M.J., & McLendon, (2003). Cohesion and performance in groups: A meta-analytic clarification of construct relations. *Journal of Applied Psychology*, 88, 989-1004.