Chair for Business Administration, especially Innovation Management

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Formal Guidelines for the Elaboration of Term Papers, Bachelor and Master Theses [1]

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[1] These guidelines have been adapted to the requirements of the Department of Management, Business Administration and Economics, Chair of Innovation Management.

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1 Principles of Academic Writing

1.1 Research Gap

Academic writing refers to combining and coordinating elements based on existing science. The aim of scientific work is to gain particular knowledge. If gaps can be identified by the combination of previous scientific work, knowledge is gained by filling these gaps. Accordingly, gaps are topics and sets of facts which have not or insufficiently been investigated until the recent date. They describe the underlying white space in investigation. Hence, these gaps have to be identified, attended, and closed as thoroughly as possible – either partially or completely.

A profound literature review is decisive, since it represents the state of the art. The thorough literature review helps to identify existing research gaps regarding all relevant literature to the topic in question. At the chair for business administration, especially innovation management, relevant literature includes texts in German as well as English language.

The research gap is elaborated according to a thematically consistent common thread, introducing the conflict priorities and offering an adequate discussion, including analysis and conclusions on the topic as well as an outlook and implications for further research.

1.2 Structural Requirements for Academic Writing

The structure in academic writing is rather rigid and its variations relate to the particular piece of literature. In general, an academic piece consists of the following structural elements:

- Abstract
- Research question
- Hypotheses / Model as appropriate
- Elaboration of own study as appropriate / Methods
- Interpretation of results
- Critical assessment / implications for future research
- Bibliography

Bachelor and master theses can be summed up in three types which are described in the following chapters 1.2.1 to 1.2.2.

1.2.1 Literature Review

The literature review refers to the reprocessing and evaluation of existing literature regarding the given topic. By giving a holistic overview of the context it offers the possibility to draw new conclusions. The literature review is characterized by the following steps:

- Intensive literature research in given databases
- Thorough analysis of particular existing literature on the topic
- Comparison and assessment of the existing literature on the topic
- Interpretation of the existing literature with reference to new and current facts

1.2.2 Empirical Study

Empirical studies can be divided into qualitative and quantitative research methods. These differ fundamentally in their approach and their respective objectives.

Quantitative study

A quantitative empirical study tests hypotheses derived from theory. In quantitative research, constructs and their interrelationships are examined with the aim of being able to derive generally valid statements. The results can then be transferred to the individual case (deduction). Statistical methods are used to analyze accumulations and thus make it possible to test hypotheses and research questions. Large (and representative) samples are needed to be able to answer corresponding questions. Data collection is usually carried out with a standardized questionnaire. The following features characterize a quantitative empirical study in particular:

- Development of research question(s)
- Current state of research
- Derivation of verifiable hypotheses
- Development of a model
- Presentation of the methodology
- Testing the hypotheses
- Presentation of results
- Discussion and interpretation

Qualitative study

A qualitative empirical study focuses on the discovery of social processes and patterns to develop a theory based on them. In contrast to quantitative research, a phenomenon or a case is analyzed in as differentiated a manner as possible. Qualitative research is used when there is little knowledge about a theoretical issue. The aim of qualitative research is therefore to gain more general theoretical statements from the individual case (induction). Survey instruments in qualitative studies are, for example, expert interviews, which leave room for the subjective view of the interviewees. The following features characterize a qualitative empirical study:

- Development of research question(s)
- Current state of research
- Presentation of the methodology
- Presentation of results
- Discussion and interpretation

By arrangement, thesis papers can also be written in cooperation with companies.

1.3   Working Title

Every piece of scientific writing has a working title. The working title depicts the overall target and is not supposed to change significantly with respect to the final title. **Each change of the working title requires the previous confirmation of your advisor** and can only be made after a consulting appointment!

1.4   Citation Guidelines

Before the question of *how* to cite is the question *what* to cite. This means to distinguish between citable literature and sources, which are not eligible for citation. In general, citable literature comprises the following:

- Scientific books
- Doctoral theses / postdoctoral theses
- Articles in Journals
- Electronic Journals

Not eligible for citation:

- Text books
- Notes / scripts
- Term papers / theses
- General internet sources
- Technical encyclopedias
- Technical dictionary
- Popular magazines

Even if a source is generally quotable it is important to critically question its statement. For example, the respectability of the publisher can be considered a criterion. Especially Journal rankings can be helpful for this. To achieve a high-quality term paper, you should primarily use A and B journals (see Ranking des VHB-JOURQUAL3). The VHB-Journal Ranking provides an overview of relevant business journals.

Basic rules:

- Any opinion of an author has to be highlighted by means of citation!
- Any citation has to be verifiable; correct citation is an expression of scientific accuracy!
- Citations from other languages must be translated with a note by whom the translation was done!

We recommend the citation style APA 7th (for further information see Publication Manual of the American Psychological Association. A summary of the APA Style is listed here:

- https://apastyle.apa.org/instructional-aids/reference-guide.pdf
- https://apastyle.apa.org/style-grammar-guidelines/citations/quotations

It is important to always indicate page numbers! Below you will find some examples.

Direct citations start and end with quotation marks and require literal accuracy. Deviations from the original should be highlighted with additions in parentheses and a reference, e.g. [Author's note]. The omission of several words is indicated by three points […]. The exact page numbering of the primary source must be indicated.

In general, the direct citation should only be used when necessary. The beginning and end of the direct quote must be marked by quotation marks.

Example: "[In]formal know-how trading can usefully be seen as an inexpensive, flexible form of cross-licensing" (von Hippel, 1988, p. 89).

Indirect citations represent the expression of other authors' thoughts in own words. The primary source should be indicated by stating the exact page number.

Example: Researchers in the field of creativity and innovation should deal with artificial intelligence to find out how it can help to achieve creative breakthroughs (Amabile, 2020, p. 352).

Direct as well as indirect citations from secondary sources should be avoided. In the case of a secondary source, the statement comes from the primary source. However, the citation is from the secondary quote which reports the statement of the primary source. If however used, the primary source will be mentioned with the note "… quoted from: …".

Example: Analysing the diffusion of innovation without knowledge of the social structures makes as little sense as studying the blood circulation without knowing about veins and arteries (Katz, 1961 quoted from: Rogers, 2003, p.24).

Special cases. If one of the required information is missing, please use the additions below:

- "n.a." (no author)
- "n.d" (no date)
- "n.p" (no place)

Example: in the text: (Humm, n.d., p. 26).

2 Procedure of Scientific Writing

Scientific writing requires some project management appropriate to the respective dimension of the work. Hence, the individual steps listed below have to be kept in mind:

1. Topic identification

    e.g. via own proposals or adaptation of existing topics offered by the Chair for

Innovation Management

2. Literature review

   e.g. via the University library (OPAC), databases, scientific journals, etc.

3. Literature evaluation and administration

   e.g. via CITAVI or Zotero. The Chair for Business Administration, especially Innovation Management <u>recommends</u> using the APA citation style in the chosen reference management software.

4. Application of the literature to own research question

5. Structure

6. Draft of extended structure considering the literature.

7. Revision – was it possible to identify a solution to the stated research question? This part requires the illustration of implications for future research and limitations of one's own research.

8. Format / Proofreading / Print – the schedule should include enough time for these final steps.

3 Literature Review

As already mentioned in chapter 2 the literature review can be carried out using the following sources:

- DBIS (DataBase- Information System) – Scientific databases for journal articles: Business Source Ultimate, EBSCO, EconBiz, JSTOR, WISO, interdisciplinary databases like SpringerLink. Please make sure that you have an existing <u>VPN</u> connection.

- Google Scholar (provides scientific papers for initial research). Please make sure that you have an existing <u>VPN</u> connection.

- Virtual libraries – e.g. ECONIS (Economic Information System), etc.

- OPAC (Bamberg University Library)

- Encyclopedias

4 Format Requirements

4.1 Language

The paper/thesis must be elaborated either in German or English language. British as well as American English are accepted by the Chair for Innovation Management; however, a consistent use of only one notation is mandatory.

4.2 Extent

The prescribed extent of papers/theses should be respected. Tables and figures within the written text are considered part of the page count. Deviations from the prescribed extent and page count are sanctioned during the determination of the final grade.

Bachelor thesis: 30 pages (+ max. 10%)

Master thesis: 60 pages (+ max. 10%)

4.3 Cover

Term papers have to be delivered using folders. Theses must be delivered with a hard (book) cover.

4.4 Paper

White paper, $80\text{g/m}^2 – 100\text{g/m}^2$, DIN A4, print one-sided.

4.5 Headings, Font style, Structure

You may select between the serif font Times New Roman (12 pt) and the sans serif font Arial (11 pt). Font color is black. First level headings are formatted in 14pt. All remaining subchapters are formatted in 12pt.

An example for structure is shown below:

1 Heading chapter (bold, 14pt)

1.1 Heading subchapter (bold, 12 pt)

1.1.1 Paragraph subchapter (bold, 12 pt)

1.1.1.1 Further level (bold, italic, 12 pt)

1.1.1.1.1 Further level (italic, 12 pt)

For formatting your fonts (especially for the headings) please use the given templates in the word template from the Chair. You will find them in the section "format templates" with the respective name of the font. This will help you to create the table of contents afterward.

4.6   Interspaces

Top and bottom   2.5 cm

Left   3.5 cm

Right   1.5 cm

Line spacing   1.5 lines

4.7   Page Numbers

Page numbers are to be positioned at the right bottom of the document. Arabic as well as Roman numberings are used. The table of contents has the first-page number, both the title page and the abstract do not carry page numbers. The table of contents starts with Roman numberings for every index and ends with the text. The text starts with Arabic numberings. All indices after the text are consecutively indicated with Roman numberings.

4.8   Submitting the paper/thesis

Before submitting the paper/thesis the following requirements have to be accomplished:

- Is the paper/thesis complete? Are there mandatory parts missing?
- Are the table of contents and the page numbers correct and updated?
- Is the citation correct?
- Has the affirmation at the end of the paper/thesis been signed?

In case of a thesis the following requirements are to be met when delivering it to the examination office (Prüfungsamt):

- Two copies with hard cover

- Two CDs comprising all data files
  - Word document/PDF document of the thesis,
  - Anonymised Word document of the work for plagiarism detection (without cover page, without appendix, with indexes)
  - Audio files, raw data,
  - Excel files,
  - Documentation of the analysis (SPSS documents, codes, MAXQDA export, etc.)
  - PDF files of the cited journal articles,
  - Other
- If expert interviews were conducted as part of the thesis, it is mandatory that the audio files of all interviews be attached to the two CDs and thus also submitted

4.9 CD labeling

The CD labeling contains the information about the first and surname, student number and the title of the thesis/paper.

5 Content Requirements

The following structure is proposed:

1. Title page
2. Abstract
3. Table of contents
4. List of abbreviations
5. List of symbols
6. List of figures
7. List of tables
8. Text
9. Bibliography
10. Annex (tables, figures, list of interviewees, transcripts etc.)
11. Affirmation

The items 4-10 must be indicated in the structure!

5.1 Title Page

The title page must be designed according to the requirements of the examination office. The following information must be included on the title page: topic, surname and first name(s), matriculation number, address, the field of study (including term of studying in this field and term at university), department and chair, name of the examiner: Professor Fliaster, name of the adviser, date of submission (see format template).

5.2 Abstract

The abstract is a brief summary of the presented paper/thesis and follows the subsequent requirements:

- Objective
- Short and concise (max. half a DIN A4 page)
- Precise and complete

5.3 Table of Contents

The table of contents reflects the logic of the paper/thesis (thread) and provides initial information about the content of the paper/thesis. Therefore, headlines are supposed to provide an insight into the content of each chapter.

Headings only consisting of one term are often not very meaningful and therefore not sufficient in most cases.

A consistent and coherent reasoning is reflected in a logical structure. Subchapters usually derive from a common higher-ranked point of view, which means that items 2.1.1. to 2.1.4 contribute to the superordinate complex 2.1.

When creating subchapters, each of them needs to comprise at least two subchapters (1.1 must be followed by 1.2). Subchapters should avoid a literal repetition of the higher-ranking chapter headlines. Please avoid too detailed subdivisions (min. ½ page written text per subchapter).

5.4 List of Abbreviations

The list of abbreviations displays all abbreviations used in the text. Commonly used abbreviations such as "etc." or "cf." are permitted and do not need to be listed. If the abbreviation is listed in a dictionary and/or encyclopedia it is not necessary to list. The first

time abbreviations are mentioned they must be written out and put in brackets after the word.

5.5   List of Symbols

The list of symbols gives an overview of all symbols used in the text.

5.6   List of Figures

The list of figures lists all figures used in the text indicating their position by means of the page number. The title and source of the figure is to be indicated **below** the figure. All kind of figures are to be integrated into the list of figures. This includes own figures, too. Generally, the author should refer also in the text to the used figures with its numbers and if needed page number. Figures are listed either at the top or at the bottom of a page, not within the written text.

Example:

FIGURE

Figure 1: Example of scientific writing

Source: Arlt (2006), p. 12

resp.

FIGURE

Figure 1: Example of scientific writing

Source: Author's own based on Arlt (2006), p. 12

5.7   List of Tables

The list of tables lists all tables used in the text indicating their position by means of the page number. The title and source of the table is to be indicated **above** the table. All kind of tables are to be integrated into the list of tables. This includes own tables, too. References in the text should be also made to tables noting its numbers and if needed page numbers. Tables are listed either at the top or at the bottom of a page, not within the written text.

Example:

Table 1: Stages of development of the internet

Source: Arlt (2006), p. 35

TABLE

resp.

Table 1: Stages of development of the internet

Source: Author's own based on Arlt (2006), p. 35

TABLE

The source reference for tables and figures in the text begins with "Source:", followed by the usual source references. Tables and figures not taken from the literature but obtained, for example, through personal interviews (e.g., source: own survey) also need a source reference. All tables and figures must have a title and must be included in the list of tables or figures.

5.8 Text

The text is characterized by the following elements:

5.8.1 Introduction

An introduction comprises necessarily an overview of the context and the relevance of the topic. This includes the explanation of and reasons for research constraint as well as the verbalization of the central research question. Furthermore, the structure of the paper/thesis should be described and explained.

5.8.2 Main Section

The main section of the paper/thesis should be coherently following the logical thread of thoughts. Every heading should refer to the text following and vice versa.

5.8.3 Conclusion

The paper/thesis ends with a conclusion reflecting the contents, stating results and discussing implications and limitations.

5.9 Bibliography

The bibliography comprises all sources of literature and/or others cited within the text. **Sources not cited in the paper/thesis are not part of the bibliography.** All sources need to be listed alphabetically corresponding to the author's last name. All sources used in the text (monographs, journal articles, chapters in an edited book, internet sources, etc.) can be cited in APA (for further information see American Psychological Association, 2020.

Unpublished or not publicly accessible sources (such as internal company sources) must be clarified on a case-by-case basis.

The following citation style is recommended for scientific writing at the chair:

- Monograph:

Author, A. (Copyright year). *Title of the book* (Xth ed.). Publisher.

Example:

Yin, R. K. (2018). *Case study research: Design and methods* (6th ed.). Sage publications.

- Chapter in an Edited Book:

Author, A. A., & Author, B. B. (Copyright Year). Title of the book chapter. In A. A. Editor & B. B. Editor (Eds.), *Title of the book* (Xth ed., pages). Publisher.

Example:

Harrisson, D. (2012). Social innovation: What is coming apart and what is being rebuilt? In H. W. Franz, J. Hochgerner & J. Howaldt (Eds.), *Challenge social innovation: Potentials for business, social entrepreneurship, welfare and civil society* (pp. 73-87). Springer.

- Journal:

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of the article. *Name of the Journal, volume*(issue), pages. https://doi.org/xxx

Example:

Hansen, M. T. (1999). The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. *Administrative Science Quarterly, 44*(1), 82–111. https://doi.org/10.2307/2667032

- Internet Document:

Author/institution (Year, month day). *Title of the article.* Name of the website. https://www.XXX.de

Example:

Kuckelkorn, T. (2018, May 30). *Inkrementell, radikal und disruptiv: Die vielen Gesichter der Innovation*. Computerwoche. https://www.computerwoche.de/a/die-vielen-gesichter-der-innovation,3545039

- Conference Paper:

Author, A. A., Author, B. B., & Author C. C. (Year). Title of the conference paper. *Name of the conference,* location, page numbers if applicable. DOI or URL

Example:

Dourish, P., & Bellotti, V. (1992). Awareness and coordination in shared workspaces. *Proceedings of the Conference on Computer-Supported Cooperative Work*, Toronto, Canada, 107-114. https://doi.org/10.1145/143457.143468

5.10 List of Annexes

The index of annexes includes all annexes, numbered in chronological order according to the reference in the paper (e.g., data protection consent forms, interviews, questionnaires etc.). An index of annexes is only necessary **for two or more attachments**. Otherwise, there is no need for an index. Insert the index before the actual annex and use consecutive roman page numbers as for the table of contents. Furthermore, refer to the annex at relevant points in the text. The index of annexes is also part of the table of contents. Contents added to the annex, analogous to tables, must be labelled with the content.

5.11 Annex

The annex comprises all further documents mentioned and/or discussed in the paper/thesis such as interview guidelines, transliterated interviews, further definitions, lists and so on. This means that all conducted interviews have to be transliterated, attached to the annex and also added to the enclosed CD-ROM. If there is more than one attachment an index of annexes has to be elaborated and included into the table of contents.

Example:

Annex 1: Example of scientific writing

Source: Author's own

ANNEX

5.12 Affirmation

The affirmation at the end of the paper/thesis represents the declaration that this work has been written by the signing person without any assistance from third parties. It also affirms that no sources have been used in the preparation of the paper/thesis other than these indicated in the paper/thesis itself. The exact wording of the affirmation is given in the format template and must be signed handwritten.

6 Particularities of team papers

Papers created in teams entail an overview of the authors at the end. This overview should clearly state the responsible parts of each team member. For each author there needs to be a separate bibliography and the corresponding author should be apparent.

Example:

1 Research question (Mr. Brown)……………………………………………….…….1

2 Principles of innovation management (Mrs. Schneider)…..………………….………...2

References

American Psychological Association (2020). *Publication manual of the American Psychological Association: The official guide to APA style* (7th ed.).

Atteslander, P. (2010). *Methoden der empirischen Sozialforschung* (13. Auflage). Erich Schmidt Verlag.

Berger-Grabner, D. (2013). *Wissenschaftliches Arbeiten in den Wirtschafts- und Sozialwissenschaften. Hilfreiche Tipps und praktische Beispiele* (2. Auflage). Springer Gabler.

Bogner, A., Littig, B., & Menz, W. (2009). *Experteninterviews: Theorien, Methoden, Anwendungsfelder* (3. Auflage). VS Verlag für Sozialwissenschaften.

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Ebster, C., & Stalzer, L. (2017). *Wissenschaftliches Arbeiten für Wirtschafts- und Sozialwissenschaften* (5. Auflage). UTB GmbH.

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Gläser, J., & Laudel, G. (2010). *Experteninterviews und qualitative Inhaltsanalyse: Als Instrumente rekonstruierender Untersuchungen* (4. Auflage). VS Verlag für Sozialwissenschaften.

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Pears, R., & Shields, G. J. (2013). *Cite them right: The essential referencing guide* (9th ed.). Palgrave Macmillan.

Stickel-Wolf, C., & Wolf, J. (2016). *Wissenschaftliches Arbeiten und Lerntechniken. Erfolgreich studieren – gewusst wie!* (8. Auflage). Springer Gabler.

Theisen, M. R. (2006). *ABC des wissenschaftlichen Arbeitens: Erfolgreich in Schule, Studium und Beruf*. dtv.

Theisen, M. R. (2011). *Wissenschaftliches Arbeiten, Technik - Methodik – Form* (15. Auflage). Vahlen.

Yin, R. K. (2018). *Case study research: Design and methods* (6th ed.). Sage publications.