OULU BUSINESS SCHOOL
UNIVERSITY OF OULU

GUIDELINES FOR WRITING A THESIS

Manual

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CONTENTS

FIGURES

TABLES

1 INTRODUCTION

The general purpose of writing a thesis is to enable you to demonstrate your proficiency in academic research as well as academic communication. More specifically, a thesis allows you to demonstrate your expertise on a chosen subject area and related research, your readiness to independently conduct research, and your ability to report findings using both written and oral communication. Writing a thesis develops not only your scientific thinking and expression, but also skills such as information retrieval, analytical and critical thinking, problem solving and argumentation – all of which are skills required for success in your future working life.

A bachelor's thesis[1] is your first academic thesis. Its purpose is to develop the basic skills needed for academic research. After completion of your bachelor's thesis, you will be familiar with the methods and tools of academic information retrieval and you will be able to critically evaluate the reliability and significance of published information. You will have acquired the necessary skills to choose, define and justify a research topic. Moreover, you will be able interpret findings and know how to draw conclusions from them. The end product is a thesis that adheres to the general principles of academic writing and which you will present orally in a seminar.

The purpose of academic texts is to present new information or, at least, a fresh perspective on a research topic. At the start of writing your master's thesis, you will already be familiar with the established conventions of academic writing, and so it will be easier for you to devote more attention to the academic content of your work. During the process of writing a master's thesis you demonstrate your ability to gather, analyse and draw conclusions from data. In other words, you will prove that you can independently produce scientific knowledge. A master's thesis is a way to show your expertise in the topic of your choice both theoretically and in practice.

Academic writing has its own particular style which is characterised by an emphasis on the subject matter along with precision of expression and the use of grammatically

[1] Students in the International Master's Programmes and subsidiary subject students write a seminar report instead of a bachelor's thesis. If not specifically noted otherwise, the guidelines presented in this manual apply to both bachelor's theses and seminar reports.

correct language. Academic texts follow rules and conventions that have been generally agreed upon. This manual presents the principles of academic writing as well as the formal writing requirements for theses in Oulu Business School (henceforth OBS) at the University of Oulu. The guidance provided is brief and concise. Thus, if you seek for more detailed information you can refer to the ample literature available (e.g. Lipson, 2005; Murray, 2006). This manual as such acts as a formal model of a thesis– except for the large number of lists, which you should avoid in your work.

The next chapter of this manual briefly outlines the different phases of the thesis process as well as the evaluation criteria for theses. The third chapter describes the typical structure of a thesis. The fourth chapter contains guidance on matters like the style of writing, referencing and paraphrasing techniques, reference lists, illustrating the text and page settings. Chapter 5 is a short summary of the aims of this manual.

2 THE PROCESS OF WRITING A THESIS

Each main subject in OBS may have different practices related to the thesis process. Detailed, subject specific instructions about the thesis process are provided at the start of thesis seminars. Despite some differences in practices, the thesis process usually progresses according to the following steps.

The process starts with *the choice of a research topic*. You are expected to propose a topic yourself, that is, the responsibility of finding a suitable topic principally lies on you. In the first stage of choosing a topic you will discuss the general subject area of your thesis with your supervisor. The research topic can be chosen from any field of your subject. It is useful to form a general idea of the central and actual research themes by having a look at the recent volumes of the most relevant scientific journals. Furthermore, you are recommended to consider topics from areas which the OBS researchers are researching. A thesis may also be commissioned by a company or another organisation outside the university.

As all decisions in scientific research, also your choice of the research topic must be justified. There are several aspects worth taking into consideration:

- your personal interest in the topic,
- your own resources (knowledge, skills and time available),
- the availability of sources,
- the availability of data,
- the scientific importance of the topic,
- the societal relevance of the topic,
- the importance of the topic for your future professional career.

After the topic has been chosen and the supervisor has accepted it, the next step is to *gain familiarity with the available scientific literature on the topic*. Familiarizing yourself with earlier research serves several purposes:

1) Forming a general picture

- What is the state-of-the-art knowledge in the chosen research area? Is there a lot or a little earlier research? Is it recent or old? Who are the leading scholars?
- From which perspectives has the topic been investigated before? What kinds of methods and data have been used in earlier research? What are central findings?
- How does your thesis topic relate to other publications in the field?

2) Gaining substance knowledge

- helps you to focus on secondary literature most relevant to your own thesis.
- helps you to choose the studies upon which you will build the theoretical framework of your thesis and design its empirical research setting.

3) Developing expertise

- helps you to evaluate the existing literature critically and to identify potential gaps and shortcomings in it.
- enables you to further specify your perspective and to define the actual research question(s) and problem(s).

Familiarising yourself with earlier research is useful to start by studying recent text books, edited collections or review articles. Using such works is a straightforward way to access the actual source material, that is, scientific journal articles. If no such general works are available, literature databases are another useful tool for finding sources. Guidance to the use of databases is given on the courses arranged by the university library. These are primarily designed for bachelor's students, but can be tailored to suit the needs of students writing their master's theses as well. The staff of the library are experts in information retrieval and they can give assistance in locating source material at any time, not only during taught courses. You can find further guidance in information retrieval from the website of the university library: (http://www.oulu.fi/library/node/10692).

Choosing your research topic as well as familiarising yourself with literature in the chosen research area are necessary for getting the thesis process started. To ensure a smooth progression and a successful end result, the most critical task is *narrowing down* *the research topic*. By narrowing down your research topic you will crystallise your final research focus, and this is where the actual master's thesis process starts from.

For students writing their first thesis, narrowing down the research topic is often difficult, and it sometimes happens that even after the work is finished, it is still, to some extent, unclear what the purpose of the study actually is. The most common problem with theses are too broadly defined topics. One should note that a broadly defined topic is not the same as having comprehensive knowledge of the subject matter. Rather, it is proof of the inability to discern the essential from the unessential. Ability to define the research topic so that the thesis offers a solution to a precisely specified research problem or task is one of the most important skills you can have as a thesis writer.

The next step in the process is writing *a preliminary research plan*. This document usually includes the following:

– a tentative title for the thesis,
– a preliminary table of contents,
– an introduction of the topic,
– an assessment of the significance of the topic and the motivation for the research,
– a description of the aim of the thesis and the research problem or task,
– an outline of preliminary research question(s),
– a brief description of the research method(s) and data and
– a brief review of existing research and/or a preliminary reference list.

The preliminary research plan can simply be a sketch outlining the general dimensions of the thesis. It serves as a guide for you at the outset of your work. Typically the plan will develop and become more precise as the work evolves. Therefore, the final thesis may differ, and often does, from the preliminary plan.

Thesis work may involve also *an intermediate report*. This report is presented when one or more sections of the thesis, for example the theoretical framework, the literature review or, in case of data-driven research, the data description and analysis have been finished. You can use for example a bullet point structure to present the unfinished sections of your thesis to help readers in forming a complete picture of your thesis.

A manuscript is a nearly finished thesis, which the thesis writer presents orally in a thesis seminar. In OBS, it is a common practice that each student acts as an opponent, that is, they familiarise themselves with another student's text and comment on it orally. The supervisor and other participants of the seminar will also ask questions and make comments and suggestions for improvement. Based on this feedback, you make the final revisions to your thesis and then submit it to be evaluated.

When your thesis supervisor judges your thesis to fulfil at least its minimal requirements, you will be given a permission to register for a *maturity test* (http://www.oulu.fi/oulubusinessschool/maturitytest). In the maturity test you will be required to write a 450-600 word essay answer to a standard question. The maturity test question for the bachelor's thesis is: *Present earlier academic research related to the topic of your thesis and your most significant findings. Consider the kind of conclusions that can be drawn based on the presented information.* The maturity test question for the master's thesis is: *Present the outcomes of your thesis in relation to prior scientific research and discuss how the outcomes of your thesis can be utilised in business life or economic decision-making.* The maturity test is an accepted proof of your command of the subject matter of your thesis and shows that you can demonstrate a good knowledge of the English language. Your supervisor evaluates your command of the subject matter, after which it is sent for language assessment. Language skills are evaluated only once. That is, if you have proved your English proficiency in the bachelor's maturity test, in the master's maturity test only your command of the subject matter will be tested. Writers of seminar reports need not take a maturity test.

When you wish to *submit your thesis for review*, your supervisor will request you to submit it to a Laturi-system (http://laturi.oulu.fi/index.php?uilang=en-US). Laturi is a system designed for submitting and archiving Master's theses in electronic form. While submitting your work to Laturi, your work will also go through an Urkund check (http://www.oulu.fi/urkundsystem). Urkund is a system for checking references and for preventing plagiarism. All teachers, professors and examiners of theses are obliged to use Urkund in their courses. In case you want to graduate by a certain date, you must take into account that the last phases in the thesis process take a lot of time. The graduation schedule for M.Sc. degree students can be found at http://www.oulu.fi/oulubusinessschool/graduation-schedule. To a large extent, the same schedule applies to B.Sc. degree students as well

Master's theses are *assessed* on a scale from 1–5 by the program director of masters' programs based on the reviewers' written evaluation. The issues under scrutiny are the following:

- research task (introduction to the research topic, defining the aim of the study and research question),
- theory section (formation of the theoretical or conceptual framework, use of sources)
- methods and data (research frame, competence in selected research methodology)
- outcomes and conclusions (presentation of outcomes, interpretation of results and conclusions) and
- research report (argumentation and critical thinking, degree of writing-technical finalisation and written expression).

The Bachelor's theses and seminar reports assessment scale is the same as that for Master's theses (i.e. 1–5), but the criteria may differ to some extent from those presented above. The evaluation criteria are explained in the seminars for each main subject.

More information about the evaluation of theses, maturity tests, and other issues related to thesis work is available on the notice board of OBS, in the guide for international degree students (http://www.oulu.fi/oulubusinessschool/guides), and on OBS web pages (http://www.oulu.fi/oulubusinessschool/mastersthesisprocess).

3 STRUCTURE OF THE THESIS

The general structure of a thesis is always the same, regardless of the research topic or the research orientation. A thesis includes the following parts in the given order: cover page, (abstract), table of contents, introduction, main body, summary, reference list and possible appendices. The following description of the structure[2] is for theses with both a theoretical and an empirical section.

a) Cover page

- The contents and the page settings of the cover page of a thesis have been integrated into a template that can be found at: http://www.oulu.fi/oulubusinessschool/tools-and-instructions.
- The title of the thesis should be informative, concise, and reflect the contents of the thesis well.

b) Abstract

- An abstract is required for master's theses only.
- The abstract provides the reader with a good general idea of the aims, content and the most important conclusions of the thesis.
- The abstract template can be found at: http://www.oulu.fi/oulubusinessschool/tools-and-instructions.

c) Table of contents

- The table of contents has the short title CONTENTS and like all the other main chapter headings it is printed in bold.
- The table of contents presents the structure of the thesis, that is, the headings and the subheadings along with their page numbers.
- The indentation (see the table of contents of this manual as an example) illustrates the hierarchy of chapters and subchapters.
- There must be at least two subchapters at each chapter level (e.g. 2.1 and 2.2).

[2] The description of the structure applies to the order in which the issues are presented in the thesis. The advance of the writing process itself differs considerably from the organisation of the thesis; starting writing from the first chapter does not often suit its purpose or may even prove impossible.

- Chapter levels should not exceed three (e.g. main chapter 2 and subchapters 2.1 and 2.1.1).
  - Chapter titles REFERENCES and APPENDICES are not numbered.
  - Figures and tables have their own tables of contents.

d) Introduction

- The purpose of the first chapter is to introduce the reader to the theme of the thesis and arouse their interest in the topic.
- The introduction typically contains the following:
  - description, background and significance of the research topic,
  - purpose of and motivation for the study,
  - research problem or task and research question(s),
  - relationship with and value added to previous research,
  - description of research method(s) and data (on a general level),
  - the most important results and conclusions (especially in quantitative research) and
  - a roadmap paragraph, for example: “This thesis proceeds as follows. In chapter 2…”.
- In the introduction, the style of expression should be concise. However, especially in master’s theses, the introduction sometimes takes up so many pages that division into subchapters might well be needed.

e) Theoretical framework

- Theoretical framework is not a chapter heading, but a section, which forms the basis for your own research.
- This section following the introduction can contain several chapters and its structure and contents are determined by the chosen topic and research orientation.
- Typically, the following issues are addressed:
  - definition of key terms and concepts,
  - description of the central theoretical frameworks and research approaches related to the chosen topic,
  - definition of the theoretical or conceptual framework of the thesis,

- review of previous empirical studies (different viewpoints, methodological approaches, essential findings, differences of opinion, contradictions and shortcomings),
- positioning of the thesis in relation to the research field and
- definition of the research strategy (in qualitative research) or the hypotheses to be tested (in quantitative research).

f) Data and research method(s)

- This section of the thesis includes the description and justification of the data being used (contents, quality, quantity, collection method, adjustments made) and the chosen research method(s).
- The descriptions should be so distinct and transparent that, following them, the research could be replicated.
- The description of methods in common use in a particular area of research need not be as detailed as those of new or less common methods.

g) Data analysis

- Data analysis is not a chapter heading, but the most important section of a master's thesis that contains a detailed description of your own research, the results you have obtained and their interpretation.
- The results are not only reported but they are also interpreted with respect to the previously presented theoretical framework and earlier empirical results.
- This section can contain several chapters and it can be structured in many different ways, for example, thematically or by research problems.

h) Summary

- This chapter (alternative title: CONCLUSIONS) begins by repeating the purpose of the thesis and its stated research problem, after which answers will be given to the following kinds of questions:
  - What are the main results of the study and what new information has been obtained?
  - To what extent do the results support or differ from earlier research results?
  - To what extent can the results be generalised?

  - How reliable are the results and what restrictions are there connected with the research?
  - How can the results be made use of?
  - What kinds of topics and questions arise for further research as a result of your study?
- The summary chapter is thus very similar to the analysis section, but now no numerical results are to be presented, the ideas are expressed in written text only, just using fewer words.

i) Reference list

- The list of references has the short title REFERENCES in bold letters, and it is not numbered.
- The reference list contains all sources cited in text.
- The reference list is compiled using the instructions given in chapter 4.3 of this manual.

j) Appendices

- The appendices contain all such clarifying information that is not purposeful to present in the actual text.
- Typical appendices are questionnaires used in the research, outlines for semi-structured interviews (see Appendix 1), and detailed data descriptions.
- The appendices contain material that take up too much space in the body of the thesis (e.g. long mathematical expressions).
- In the text, there must be a reference to all appendices.
- The appendices are numbered consecutively.
- In the table of contents, the appendices are given a title describing their contents.

4 WRITING THE THESIS

It is said that you learn to write by writing. Although that is true about academic writing as well, we have a style of our own characterized by adherence to agreed formal writing conventions. The writer of a thesis is supposed to know the basics of academic writing conventions. This chapter describes the typical features of an academic text along with the requirements for the language and the layout of theses in OBS.

4.1 Style of writing

Scientific writing requires a good knowledge of standard language and the command of a formal style of writing. The grammatical and the orthographical rules of the language must be followed. Scientific language is unambiguous and precise and discards vague expressions like “several studies show that…”, with no valid reference to an example. An English text does not use contracted forms like “doesn’t” or “can’t”. All standardised forms of English are accepted but they must not be mixed. A characteristic feature of the scientific style is the use of special concepts and terms, which must be defined when they first occur in the text. Acronyms, like the ECB (the European Central Bank), can be used if they make the language more fluent and if the reader has previously been familiarized with their meaning. Short expressions like “e.g.” and “cf.” can be used in brackets, but in a consecutive text whole words are written.

In the academic community, the use of the first person pronouns “I” or “we” is a source of some disagreement. Academic writing tends to be neutral and objectivity is the goal, so, the passive voice or the third person are typically used. The first person plural is the correct choice if you want to emphasise the choices that you, as a researcher, have made. Notice that academic texts use the pronoun “we” even if the talk is about one person only. The tense is normally the present, also when referring to earlier research.

Academic texts convey information. To avoid misunderstandings, expression must be exact and precise. This is achieved by a logical organisation of the text, by writing carefully considered sentences and by the astute division of your text into paragraphs, subchapters and chapters, which then form a solid whole. You can contribute to the clarity of your text by stepping into the shoes of your reader and examining the text from an outsider's point of view. Other important aspects are fluency and coherence of expression. Do individual sentences and paragraphs fit their environment and are the chapters logically connected? You can increase the fluency of your text by letting the reader know, between chapters, what will be dealt with next. This is how the reader will keep pace with your thoughts. This can be done either at the beginning of a new chapter before the first subheading or at the end of the previous chapter. The chosen practice must be followed consistently through the whole work.

4.2 Citing references

Academic texts contain references to previous research, which are indicated by in-text citations. In your thesis, each piece of text that is not based on your own reasoning must be accompanied by an appropriate reference to the original source(s). Only those facts that may be regarded as general knowledge do not require a citation. If, however, your text is based on some source, even if it is general knowledge, the source must be indicated. A person who uses someone else's text without giving credit to the original author is guilty of academic theft called *plagiarism, which is considered a serious academic offence at the University of Oulu* (see: http://www.oulu.fi/sites/default/files/Plagiarism_or_unauthorized_citation_final.pdf).

A Bachelor's thesis and a Master's thesis are two separate theses, however, linking them to each other is possible. A common practice is such that, in the Bachelor's thesis, the student writes a review of the previous literature on the chosen topic. This review then becomes the basis of the theoretical part of the student's master's thesis. One should note that at the University of Oulu, self-plagiarism, that is, using your own text unchanged in two or more occasions, is also unacceptable. If you use the text of your Bachelor's thesis as the basis of your Master's thesis, you must indicate clearly which part of your work is based on your earlier work. This is best done in the last paragraph of the introduction of your Master's thesis, in the so called roadmap paragraph. The fact that the Bachelor's thesis and the Master's thesis are two independent theses leads to the practice that the Bachelor's thesis must be written before the Master's thesis. Furthermore, you must be able to show clearly what additional value your Master's thesis brings to your Bachelor's thesis.

References can be cited in many different ways. Different disciplines have different practices and even within a discipline there is variation between different scientific journals. In our field, the most common technique is the so-called Harvard system, in which references are cited in-text with the author's name followed by the date of publication and page number if necessary.[3] In the theses of OBS, references are cited according to the APA (American Psychological Association) system, which is based on the Harvard system.

a) Reference to one author

Example 1: Fama (1970) distinguishes three forms of market efficiency: weak form efficiency, semi-strong form efficiency, and strong form efficiency. According to Fama, markets are weak form efficient when…

Example 2: Odean (1998, p. 1776) assumes that investors' value function is concave in the domain of gains and convex in the domain of losses.

Example 3: According to Jaccard (2001, pp. 65–66), correlation between the interaction term and its component variables is not a problem unless the multicollinearity is extremely high.

- APA citation system uses an author–date form. Hence, an article is referred to using the surname of the author and the year of publication. Each reference cited in text must appear also in the reference list of your work.
- If you reference the same study multiple times within the same paragraph, you need not to repeat the year (Example 1). However, in parenthetical citations, (e.g. Fama, 1970), always include both the surname and year.
- If a certain point in the article (e.g. a figure) requires special emphasis, the page number is given (Example 2).
- If a book is referred to, the page number(s) must always be given (Example 3).

[3] Citations are not written in footnotes in this system. Instead, footnotes may contain short remarks or specifying facts that do not fit the original text smoothly.

- If page number is included, use ‘p.’ for references contained in one page, and ‘pp.’ for references across several pages. Separate page numbers using a dash (–) not a hyphen (-).
- Examples 1 and 2 are so-called author-oriented citations and Example 3 is a so-called subject-oriented citation.

b) Reference to more than one author

Example 4: Fama and French (1992) show that small companies and companies with low book-to-market values have higher stock returns.

Example 5: … there is also a relationship between firm size and book-to-market value (Fama & French, 1992).

Example 6: Davila, Foster and Oyon (2009) outline a framework, where innovations are categorised based on two dimensions: source of the innovations and their impact on company strategy.

Example 7: Davila et al. (2009) point out that existing knowledge of how management identifies, chooses and implement strategic innovations is still relatively limited and further research is needed.

- In the running text use ‘and’ before the last author’s name (Example 4). In parenthesis use an ampersand ‘&’ to separate last author’s name (Example 5).
- When a work has three, four or five authors, cite all authors in the first reference (Example 6). In consecutive citations include only the surname of the first author followed by ‘et al.’ (Example 7).
- If a work has six or more authors cite only the surname of the first author and the year in the first and consecutive citations.

c) Reference to one sentence

Example 8: Escalation of commitment refers to a phenomenon whereby people tend to continue or even intensify their commitments to a previously chosen losing course of action (Staw, 1997, p. 191). In general, escalation situations…

- When just one sentence is referred to, the citation is included as a part of the sentence and it is written inside the sentence before the full stop. (Cf. the placing of full stops in examples 9 and 10.)

d) Referring to many sentences or a whole paragraph

Example 9: The traditional product term approach tests for a bilinear interaction for the log odds. However, there are other forms of interaction and it is important to make sure that the right type of interaction is being modelled. Especially with continuous variables, the traditional product term approach may not be appropriate and a more complex model is needed. (Jaccard, 2001, pp. 61–62.)

Example 10: Existing evidence shows that the disposition effect is attenuated or even reversed in December. This is most likely because of tax considerations. (Grinblatt & Keloharju, 2001; Odean, 1998.) On the other hand, …

- When many sentences, or a whole paragraph, are referred to, the citation is written after the full stop of the last sentence, forming a whole sentence which ends in a full stop within the brackets.
- When the reference includes more than one source, the sources are written in alphabetical order and separated by semicolons (Example 10).

e) Reference to a publication whose author is unknown

Example 11: During the last 20 years (1991–2010), the volume in Helsinki Stock Exchange has hundred folded (NASDAQ OMX Helsinki, 2011, p. 10).

- If a publication is published by a group (corporation, association, government agency etc.) instead of an identified author, use the name of the group to replace author’s surname (Example 11).

f) Reference to an internet source or to other non-printed material

Example 12: Woodpine and Liu (2010) examine the relationship between different leadership styles and moral decisions that internal auditors make.

Example 13: A consultation by the European Commission (2011) shows that there is a significant gap between what stakeholders of public-interest entities expect of a statutory audit and what the auditors actually do.

Example 14: According to W.A. Edelström (personal communication, August 6, 2012), the overall purpose of the merger is to streamline organisational structure of the company.

- Electronic sources and other non-printed materials are cited according to the same principles as printed materials.
- Example 12 cites an electronic journal and Example 13 cites an electronic publication with a group author. If the author is unknown, or a group, refer to Example 11 above.
- Example 14 cites a telephone interview. If a form of personal communication is not retrievable, e.g. private telephone conversation or non-archived email or message, cite the reference only in text and do not include it in the reference list. Include initials and surname of the communicator and a date as exact as possible in the citation.
- If an interview is retrievable, use citation guidelines for the source where information was retrieved, e.g. magazine or audio.

g) Direct quotation

Example 15: According to Pyrczak and Bruce (1992), a direct quotation is justifiable “when the writer of the review (1) wants to illustrate either the original author’s skill at writing or lack thereof or (2) believes that the wording of a statement will have an emotional impact on the reader that would be lost in paraphrase” (p. 51).

- Direct quotes should be used deliberately and they should not be excessively long.

- Direct quotations are placed between quotation marks "…" and their wording must be exactly same as in the original source.
- Author's name, publication year and page number are included in the citation as in Example 15.
- If a direct quotation is 40 or more words, a block quotation is used. Start a block quotation from a new line, indent it from the left margin and omit quotation marks. Cite author name, publication year and page number(s) in parenthesis after the final punctuation mark of the block quote.
- Qualitative research often utilises direct quotations when referring to interviews. Such quotations are separated from the actual text by beginning them from a new line, indenting by 1cm from the left margin and by using spacing 1:

  "… Then we realised that if we want to remain in the net business, we have to start using classified ads." (The managing director)

g) Reference to an edited collection, a working paper, or a secondary source

- Before referring to an article in an edited collection, check whether the article has been published earlier in a scientific journal. If so, refer to the original article. If only an edited collection is available, include name of the article's author (not that of the editor) in the in-text citation.
- If you refer to a working paper, refer to the latest available version.
- Avoid the use of secondary sources. The use of secondary sources is only acceptable if the original source is very hard to obtain. For example, if Ewert's stydy is cited in Pott et al.'s work and you do not have access to Ewert, include both articles in the reference list and use the following in-text citation: Ewert's (2003) stydy (as cited in Pott et al., 2009, p. 216) shows that …

h) Reference to a legal text

Example 16: …does not cover emissions from international maritime traffic (NECD 2:1(a)).

– In a reference to a legal text, the official acronym (which must be defined at its first occurrence in the text) is used, followed by the paragraph, the article and the clause.

4.3 Reference List

The reference list must contain all sources that have been referred to in text. The reference list enables the reader to locate the original source of information referred to in text. There is no one correct way of compiling the list of references – every scientific journal has its own practice. In OBS the list of references is compiled following the conventions of the APA method.

- Only sources referred to in text are listed.
- The sources are listed in alphabetical order according to the surname of the first author, followed by all their initials.
- The order of authors within an article is kept similar to that in the original source, which might not be alphabetical.
- In a reference, the names of authors are separated using a comma, except for the last two names which are separated by an ampersand (&).
- If more than one work from the same author are referenced, the works are listed in chronological order from the oldest to the most recent.
- If a one-author and a multiple-author work with the same main author are referenced, list the one-author entry first even if the multiple-author work was published earlier.
- If there are more than one work from the same author in the same year, the works are listed in alphabetical order according to the title of the publication (excluding A or The), placing an index number immediately after the publication year using small letters (e.g. 2007a, 2007b).
- It is recommended to include a DOI (Digital Object Identifier) to a reference entry for both print and electronic sources if one is available.
- In the reference list, spacing 1 and hanging indentation of 0.5 cm are used. There is one carriage return between each entry.

When compiling the reference list, you should first consider to which of the groups a)–i) presented below the source belongs. Once you have identified the source, the examples and the associated comments guide you in making an entry. You can also use bibliographic management tools, such as RefWorks, whose use is taught in the data retrieval courses of the university library. For further information, you can also consult the 6th edition of the Publication Manual of the American Psychological Association available in the library.

a) An article in an academic journal

Dunning, J. H. (1988a). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies*, *19*(1), 1–31. doi:10.1057/palgrave.jibs.8490372

Dunning, J. H. (1988b). The theory of international production. *International Trade Journal, 3*(1), 21–66. doi:10.1080/08853908808523656

Kross, W. J. & Suk, I. (2012). Does regulation FD work? Evidence from analysts' reliance on public disclosure. *Journal of Accounting and Economics*, *53*(1-2), 225-248. doi:10.1016/j.jacceco.2011.11.004

Pagano, M., Panetta, F. & Zingales, F. (1998). Why do companies go public? An empirical analysis. *Journal of Finance, 53*(1), 27–64. doi:10.1111/0022-1082.25448

- Capitalize only the first word of the article title and of the subtitle, i.e. a word after a full stop, question mark, exclamation mark or a colon.
- Capitalize all words, except conjunctions, of the journal title.
- Italicize the title of the journal.
- Give volume and issue number of the journal, and page numbers of the article after the journal title. Italicize volume number. Separate page numbers by a dash.
- If a DOI for an article is not available and the reference was retrieved *online,* give the URL of the journal home page, no retrieval date is needed.
- If an article has not been published yet, replace journal information with 'in print'.

b) A book

Clegg, S., Kornberger, M. & Pitsis, T. (2008). *Managing and organizations: An introduction to theory and practice* (2nd ed). Los Angeles, CA: Sage Publications.

Hull, J. C. (2011). *Options, futures and other derivatives* (8th ed). Boston, MA: Pearson Education.

- Capitalise the first word of the title and the subtitle of a book.
- Italicize the title of a book.
- Mention the edition number (abbreviation ed.), if other than the first, immediately after the title.
- Last, give the place of publication and the publisher's name.

c) Online book

Cunningham, L. A. (1997). *The Essays of Warren Buffett: Lessons for Corporate America.* Retrieved from http://www.monitorinvestimentos.com.br/download/The%20Essays%20Of%20Warren%20Buffett%20-%20Lessons%20For%20Corporate%20America.pdf

- For books available online, replace publisher information by the electronic retrieval statement.

d) An article or chapter in a book or a reference book

O'Curry Fogel, S. & Berry, T. (2010). The disposition effect and individual investor decisions: The roles of regret and counterfactual alternatives. In B. Bruce (Ed.), *Handbook of behavioral finance* (pp. 65–80). Cheltenham, England: Edward Elgar Publishing.

Prelec, D. (2009). Compound invariant weighting functions in prospect theory. In D. Kahneman & A. Tversky (Eds.), *Choices, values, and frames* (pp. 67–92). New York, NY: Cambridge University Press.

- List article author, publication year, and article title according to instructions from part a).
- Follow article information by editor information. In is followed by editor initials, surname and (Ed./Eds.) depending on the number of editors (one/many).
- Italicize the name of the edited book and list relevant page numbers immediately after. End the reference entry with place of publication and publisher name.

e) Newspaper article

Siegel, M. (2012, February 10). Economic outlook: Eurozone prospects worsen. *The Financial Times*, p. 12.

f) Online newspaper article

Romei, V. (2017, August 14). Germany: from 'sick man' of Europe to engine of growth. *The Financial Times.* Retrieved from https://www.ft.com

g) Reports, discussion papers, statistics, working papers, etc.

Bank for International Settlements. (2011). *Progress report on Basel III implementation*. Retrieved from http://www.bis.org/publ/bcbs232.pdf

Korkeamäki, T. & Takalo, T. (2012). *Valuation of innovation: The case of iPhone.* (Research Discussion Papers 24/2012). Retrieved from Bank of Finland's Institutional Repository website: https://helda.helsinki.fi/bof/handle/123456789/7913

Official Statistics of Finland. (2017). Consumer price index July 2017 [E-publication]. Retrieved from http://www.stat.fi/til/khi/index_en.html

Stern, J. J. (2004). *The impact of the crisis – decline and recovery* (CID Working Paper No. 103). Retrieved from https://sites.hks.harvard.edu/cid/cidwp/103.htm

Dierksmeier, C. (2011). *Reorienting management education: From the homo economicus to human dignity* (SSRN Working Paper No. 1766183). Retrieved from http://ssrn.com/abstract=1766183

h) Theses and Dissertations

Juntunen, M. (2011). *Corporate rebranding processes in small companies. A multiple case study from B2B software industry* (Doctoral Dissertation). Retrieved from http://jultika.oulu.fi/Record/isbn978-951-42-9451-8

Karivaara, J. (2012). *Creating portal-based international business to business relationships in retail business* (Unpublished master's thesis). University of Oulu, Oulu.

- If a thesis/dissertation is not available online, include 'Unpublished' prior to master's thesis/doctoral dissertation inside the brackets and replace retrieval information by name of institution, and location.

i) Laws and statutes

Finnish Accounting Act, 31.12.1997/1336.

i) Interviews

- When the research material of your thesis includes personal interviews they are not included in the reference list but as appendices. Instructions for in text citations for personal communications can be found from 4.2.
- If you use interview material from for example a newspaper article, proceed by listing the reference as a newspaper article.

4.4 Paraphrasing

Plagiarizing another author's text without correct reference to the original source is a serious offence, so the referencing techniques presented in chapter 4.2 should be adopted right at the beginning of the thesis writing process. In addition, it is of vital importance to realize that the original texts must not be used unprocessed; they need to be paraphrased. Paraphrasing is restating what someone else has said *in your own words*. You should introduce the *essential issues for your own thesis correctly and in adequate extent.* The aim is to crystallize the central issues of the original text, however, at the same time, you should present your own observations, opinions and conclusions.

There are formal rules for in-text citations. However, it is not possible to define such exact rules for paraphrasing. A good paraphrase is, however, characterized by certain features, which will be illustrated by examples in the following.

Original text:

> "At the beginning of each month, we rank all stocks independently on the basis of past returns. The stocks are then assigned to one of five portfolios based on returns over the previous *J* months (*J* = 3, 6, 9 or 12). In each month, we long the winner portfolio and short the loser portfolio. […] In table 1, we report average monthly returns over the next *K* months (*K* = 3, 6, 9, 12). In addition, we also report the mean return from a strategy of buying the extreme winners and selling the extreme losers (R5−R1). For instance, with a six-month portfolio formation period (*J* = 6), past winners gain an average of 1.37 per cent per month over the next six months (*K* = 6). We also report that the past losers lose an average of 1.51 per cent per month over the same time period. The difference between R5 and R1 is 2.88 per cent per month." (Drew, Veeraraghavan & Ye 2007, p. 774.)

An example of a *bad-quality* paraphrase:

> At the start of each month, Drew, Veeraraghavan and Ye (2007) sort all stocks independently based on their past returns. After that, the stocks are allocated to one of five portfolios based on their returns over the preceding *J* months (*J* = 3, 6, 9 or 12). In every month, Drew et al. go long the winner portfolio and short the loser portfolio. The authors then present the mean monthly returns over the next *K* months (*K* = 3, 6, 9 or 12). Furthermore, they also calculate the average return from a strategy of buying the winner portfolio and shorting the loser portfolio. For example, with a six-month portfolio construction period (*J* = 6), past winners appreciate by an average of 1.37% per month over the next six months (*K* = 6). The results also show that the value of past losers drop by an average of 1.51% per month over the same time span. The difference between extreme winners and extreme losers is thus 2.88% per month.

If interpreted strictly, the above paraphrase is very close to plagiarism and, if interpreted more loosely, it is located in the grey area. *This is true even though the original source is correctly referenced.* The most common failures in paraphrases are, firstly, that the writer follows the original passage too closely and, secondly, the fact that the writer does not present all essential information (or sometimes does the opposite by emphasizing unessential information). The paraphrase above fails in both respects. First of all, the paraphrase resembles the original text too closely; paraphrasing is not changing, leaving out or adding a few words or changing the order of the words. Nor does the writer report all the essential information the reader needs to know. As the text has been separated from its original context, the writer's responsibility is to write it out to ensure the reader has a clear understanding of the issue. In this example, among other things, the reader is left without the information about the data that has been used in the study.

What best explains the defects of paraphrases is the writer's failure to understand the original text properly, that is, the writer's inability to put the poorly understood information into his/her own words. A deep comprehension of the original text calls for a careful scrutiny of the source material. It is worthwhile to start with the big picture – picking up the main thread and identifying the essentials – and then relating details to the whole. A good aid is making notes and mind maps while reading.

An example of a *good* paraphrase:

> To examine whether the momentum effect is present in the Australian stock market, Drew, Veeraraghavan and Ye (2007) follow the method first introduced by Jegadeesh and Titman (1993): First, each month all stocks in the sample are sorted into five portfolios based on their returns over the past 3, 6, 9 or 12 months. Portfolio of stocks with the lowest (highest) past returns is called the loser (winner) portfolio. Second, a zero-cost strategy is applied that sells the loser portfolio short, uses the proceeds to buy the winner portfolio, and holds this position for 3, 6, 9 or 12 months. Drew et al. show that the returns of all the zero-cost momentum strategies are positive and statistically significant.
>
> Another study conducted in the Australian stock market is Phua, Chan, Faff and Hudson (2010), who find results qualitatively similar to those of Drew et al. (2007). However, there are surprisingly large differences in the magnitude of the observed momentum profits: For example, the 6-month/6-month momentum

> return is 2.88% per month in Drew et al., but Phua et al. report a monthly return of just 0.62%. This is rather peculiar since they both have almost the same sample period (1988-2002 vs. 1991-2002). Phua et al., however, use daily data, whereas Drew et al. have monthly data. Another difference is that Phua et al. exclude very low-priced and illiquid stocks from their analysis. Whatever the reason behind the discrepancy between the results, it is inadequately addressed by Phua et al.

In the above example, the writer provides all the essential information regarding the Drew et al. (2007) study in her own words and concisely, but with enough detail to illustrate the main points to the reader. The writer does not only paraphrase the text of Drew et al., but also discusses the background of the study, compares the results with those of another study and reflects on their differences. At its best, a paraphrase is a synthesis of the source material and of the writer's own argumentation and reasoning.

4.5 Illustrating the text

A thesis often comprises elements supporting and illustrating the text, such as tables, figures and mathematical formulas. All illustrative material is closely linked to the text, however, all tables and figures should be composed in such a way that the reader is able to understand them without reading the text. In the text the essential observations and conclusions based on the tables and figures, not repeating the individual numerical information (i.e. single figures) reported in them, are presented. Tables, figures and mathematical formulas are numbered consecutively, each as an independent series. They are placed as near as possible to the section of text where they are first referred to.

4.5.1 Tables

A great amount of information can be compressed into tables, for instance in reporting numeral information (see example tables 1 and 2) and presenting summaries (see example table 3). In order to achieve a neat result, it pays to make use of the table tool of the word processing program.

Example table 1. Unemployment rate (%) in Finland.

	2004	2005	2006	2007	2008	2009	2010	2011
Men	7.9	6.8	6.0	5.9	6.0	8.7	8.2	8.4
Women	7.5	8.6	6.8	6.1	6.1	7.0	7.5	6.3
All	7.7	7.6	6.4	6.0	6.1	7.9	7.9	7.4

Source: Statistics Finland

Example table 2. Determinants of monthly stock returns.

Explanatory variable	Model 1	Model 2	Model 3	Model 4
	Panel A: Period 1980–1994			
Intercept	0.985***	0.856***	0.869***	0.799***
	(2.647)	(2.588)	(2.351)	(2.321)
Market return	1.234**			1.056
	(1.998)			(0.621)
Firm size		-0.825***		-0.996***
		(-2.694)		(-2.332)
Book-to-market ratio			2.637***	3.417***
			(5.639)	(5.474)
N	11 400	11 350	11 050	11 025
	Panel B: Period 1995–2010			
Intercept	0.751***	0.856***	0.869***	0.799***
	(2.647)	(2.588)	(2.351)	(2.321)
Market return	1.836			1.056
	(1.601)			(0.621)
Firm size		-0.825***		-0.996***
		(-2.694)		(-2.332)
Book-to-market ratio			2.637***	3.417***
			(5.639)	(5.474)
N	12 100	11 950	11 900	11 825

N = number of observations, *t*-values in parentheses,
* = 0.05 level of significance, ** = 0.01 level of significance, and *** = 0.001 level of significance.

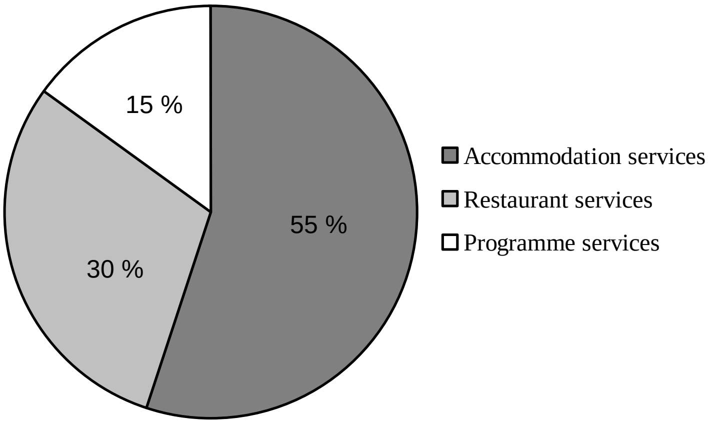
Example table 3. Technical and social validity of recruiting methods (adapted from Folger & Cropanzano, 1998, pp. 84–91).

Method	Technical validity	Social validity
Recruiting firms	yes	yes
Biographical information	yes	no
Cognitive ability tests	yes	neutral
Structured interviews	yes	yes
Unstructured interviews	no	yes
Integrity tests	yes	neutral
Personality tests	yes	no
Reference checking	no	yes
Aptitude tests	yes	yes
Drug tests	yes	neutral

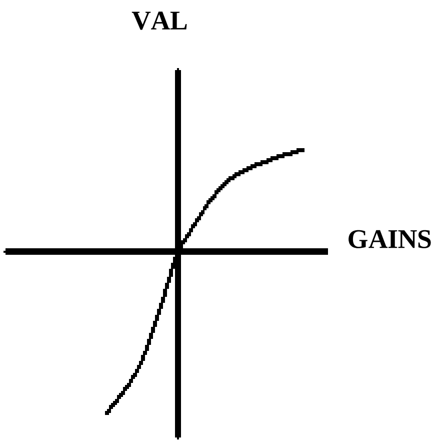
- As a rule, the table fills out the whole column.
- A broad table is presented horizontally.
- The same font is used as in body text, font size is 10 pt.
- A table is given a short but descriptive title.
- The title is written above the table, using font size 10 pt and bold letters.
- There are horizontal lines above and below the column headings as well as at the bottom of the table.
- Below the table there is a caption, giving all necessary information for understanding the table. The font size of the caption is 9 pt.
- The possible source is given in the title of the table or in the caption (cf. example tables 1 and 3).

4.5.2 Figures

In scientific research, as in all communication, figures are an effective means of conveying information. Like tables, figures can be used for illustrating the results of your own research (see example figure 1). It should be kept in mind that figures are protected by copyright laws. Therefore, you must not copy or scan another person's figure into your thesis without the copyright owner's permission. If you have no permission, you will have to redraw the figure yourself – preferably using a graphics program – and provide the reader with a reference to the original source (see example figure 2).



Example figure 1. Breakdown of sales for Firm X in 2011.



Example figure 2. Value function (adapted from Kahneman & Tversky, 1979, p. 279).

- In figures, the same font is used as in body text.
- A figure is given a short but descriptive title.
- The title is written below the figure, using font size 10 pt and bold letters.
- Within the figure font size 10 pt is customary.

- If the figure is not the size of the whole column, it is placed in the middle of the page.
- If you make any changes to another person's figure, you must indicate this by adding the words 'adapted from' to the reference.

4.5.3 Formulas and equations

When presenting mathematical material, the equation editor of the word processing program or another program should be used. Formulas and equations are integrated into the text in one of the following ways:

Example 1: Government has the following budget constraint:

$$B_t = D_t + (1 + r_t)B_{t-1}, \tag{1}$$

where the subscript t refers to time, B_t is public debt at the end of the period, D_t is the primary deficit and r_t is the real interest rate from t-1 to t (Lahiri & Puhakka, 1998, p. 181).

Example 2: Equation (2) represents the relationship between domestic price level P, exchange rate E and foreign price level P^* at time t:

$$P_t = E_t P_t^* . \tag{2}$$

This relationship is called the law of one price.

Example 3: The demand, q, is assumed to be of the following form:

$$q = f(sh)v, \tag{3}$$

where $s =$ exchange rate,
$h =$ price and
$v =$ random factor.

- The font is the same as in the body of the text, font size is 12 pt and text is in italics.
- The size of the subscripts and superscripts is 8 pt.
- Formulas and equations are indented 1.5 cm.
- The equation number is enclosed in parentheses and placed flush right.
- There is no need to number equations that are part of a series of intermediate steps that are not specifically discussed in the text.
- Symbols being used must be defined at their first occurrence.
- The use of symbols must be consistent: that is, the same symbol should not be used to denote different things, nor should the same variable or concept be referred to by using different symbols in different contexts.

4.6 Page settings

Page settings for a thesis are as follows:

Page numbers	placed at the top right-hand corner of the page, font size 12 pt, numbering starts from the cover page but the page numbers are shown not until the first page of the introduction chapter
Table of contents	chapter headings are formatted the same as in the text, sub-headings are indented
Line spacing	1.5 (1 in the list of references), spacing before and after the paragraph 0 pt
Indentations	list of references 0.5 cm hanging indent, other lists 0.5 cm, long direct quotations 1 cm, formulas and equations 1.5 cm
Carriage return	after each chapter heading, paragraph, list, figure, table, formula and equation

Page margins	top and bottom margin 2.5 cm, left margin 4 cm, right margin 2.5 cm, gutter 0 cm, headers and footers 1.25 cm
Basic font style	Times New Roman 12 pt, fully justified
HEADING 1	Times New Roman 12 pt, CAPITALISED, **bold**, each main chapter starts from a new page
Heading 1.1	Times New Roman 12 pt, **bold**
Heading 1.1.1	Times New Roman 12 pt
Appendix 1	Times New Roman 12 pt, **bold**
Footnotes	consecutive numbering, Times New Roman 10 pt, line spacing 1
Emphasis	*italics*

You can either adjust the page settings manually, or use a customised Microsoft Word template that can be found from: http://www.oulu.fi/oulubusinessschool/tools-and-instructions. Some instructions (not all are in English) on how to use the template can be found in the following manual "Tutkielmantekijän Microsoft Office 2013 Word –ohje": http://www.oulu.fi/kauppakorkeakoulu/ohjeita_opinnaytetyohon.

5 SUMMARY

Writing a thesis requires knowledge of the conventions of academic writing. This manual presents the principles of academic writing and the technical formalities that must be adhered to when writing a thesis in OBS. This manual is intended to be used as a self-study material. The instructions will guide you, on your own, to compose a thesis, which is refined in language and has a layout consistent with the formal requirements set for theses. When the responsibility for the formalities lies on you, during your supervisory meetings you and your supervisor are able to concentrate on the essentials, that is, on the contents of your work.

After reading this manual, particularly if you are writing your first thesis, you may get the impression that the task ahead of you to memorize an enormous amount of information. In a way it is true, as the list of matters to be considered is very long indeed and, ultimately, commas seem to become your best friends. Luckily, there is no need to learn these detailed rules by heart – they can always be checked from this manual. One has to bear in mind, though, that any manual like this cannot be a perfect guide. In the course of writing your thesis, questions will certainly arise which cannot be anticipated. With regard to all problems and uncertainties, you are always able to turn to your supervisor. In the end, one has to point out that just reading these instructions will not get your thesis finished. Your own power of thinking, your thirst for knowledge and your own determination are the necessary tools to get the job done.

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Appendix 1

OUTLINE OF A SEMI-STRUCTURED INTERVIEW

Managing the cooperation between businesses

1. For how long has cooperation between businesses been part of your work?

2. What is meant by cooperation between businesses?
   - What is it / how would you define it?
   - Why do companies engage in cooperation? The benefits of cooperation?
   - What does cooperation between companies encompass?
   - The effects of cooperation from the viewpoint of an individual company?

3. How would you describe a successful cooperation between businesses?
   - What is required for cooperation to be successful?
   - What are the main obstacles that prevent successful cooperation?

4. What is meant by managing the cooperation between businesses?
   - What issues are important?
   - What does it involve in your own organization?
   - How would you, personally, organise the management of cooperation between businesses?

5. How does cooperation between businesses show as part of the strategy/ planning/operation/raison d’être of your own (sub)organization?

6. How would you describe the existing cooperation between businesses?
   - How could it be developed?
   - What does it require?