GUIDE FOR THESIS AND ACADEMIC WRITING

Centria
AMMATTIKORKEAKOULU

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CONTENTS

FOREWORD

The thesis indicates a student's expertise in understanding, applying and producing professional results in their own field. At its best the thesis is a bridge between studies and working life.

This guide gives information following the general principles for thesis written in national working groups in 2005-2006. The guide can be applied in all degree programmes in Centria University of Applied Sciences. In addition, each field also has their own practices that will be explained in thesis seminars in more detail.

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On behalf of the working group
Marko Forsell

1. THESIS PROCESS

The thesis is an extensive and practical development or research project usually conducted towards the end of the study. The thesis is a bridge between study and working life enhancing students moving on to professional expert duties. The thesis project will help a student in applying the skills and knowledge learned in practical expert duties related to their professional studies. Below the process is described in short.

A *Choosing the topic*

The topic can derive from working life, a project or it can be based on the author's own interests. The aim is that the students themselves find the topic but the supervisor can also assist in looking for a topic if needed.

B *Thesis contract*

The student can download a thesis contract form from Optima and write the name, objectives, research problem or development task and schedule in it. The student, instructor and teacher supervisor nominated by the university can sign the form. The thesis process can be started by a kick-off meeting between the student and the supervisors from the university and the organization involved.

C *Thesis proposal and implementation plan*

A proposal for the thesis topic together with an implementation plan is made at the beginning of the process. This plan is presented in a separate seminar or on a relevant course. The plan describes the background, problem or development task and the objectives for the thesis. The plan also includes a schedule for the whole process.

D *Progress*

During the process it is very important to keep the possible commissioner up-to-date. The student also has to submit an interim report to the supervisor. During the writing process the student is entitled for language instruction whenever necessary. The language instructor will proofread the thesis report before it is uploaded in the Theseus database.

E *Maturity test*

The teacher supervisor will decide when the student can take the maturity test and agree on the date together with the student. In the maturity test the student's language skills and the contents of the thesis are assessed. The language of the maturity test is assessed by the language instructor and the contents are assessed by the supervisor.

F *Presenting the thesis*

The thesis report is presented when it is complete. The abstract can be used as the basis of the presentation. The oral presentation takes approx. 20 minutes including questions and answers. The presentation focuses on the thesis topic, background, objectives, methods and results.

G *Self-evaluation of the project*

One part of the thesis project is to fill in a self-evaluation form which is found in Optima. The student or the teacher supervisor should also ask the working life instructor, if possible, for an evaluation on the practical part of the project.

H *Submitting the report for assessment*

The report must be given to the supervisor for assessment two months before graduation. The report must also be sent to Urkund program for plagiarism detection. The teacher supervisor provides the student with Urkund email address. The assessment criteria for the thesis project are presented in chapter 11. It is recommended to study the criteria carefully immediately when starting the project; that way it is easier to focus on the right aspects. Please notice that after the assessment of the thesis report it takes approximately one month before the student can graduate.

Finally the student uploads the final version of the report in the THESEUS database[1]. The final version must be accepted by the teacher supervisor. If the student does not want to submit their report in THESEUS, the alternative is to have the report bound and given to the teacher supervisor following the instructions of Centria degree regulations.

[1] www.theseus.fi

2. SEMINARS AND GROUP MEETINGS

Different degree programs have slightly different procedures regarding seminars. Here, in short, you can read the grounds for seminar work and group meetings.

Most degree programmes organise seminars where the progress of students' reports is presented together with the general issues involved in writing a thesis report. During seminars students have a possibility to ask questions and solve possible problems in their work. In addition the implementation plan of the thesis, the research plan and interim reports are discussed. In the seminars students review the reports and the supervisor comments on them.

Before a seminar meeting the students study each thesis report and give constructive criticism, both in writing and orally. In the actual seminar the group gives feedback on the topic, topicality, research problem, methods and results and also presents questions to the author/s.

The seminar is an interactive situation and all members should actively participate, not just the nominated opponent. The author should be able to give answers and arguments for the solutions taken.

3. STRUCTURE MODELS AND THEORETICAL FRAMEWORK

The structure of the thesis report is constructed by the topic, the problem setting and the theoretical framework of the thesis. The thesis project in a university of applied sciences can consist of research work, product or production tasks. In quite many fields of education the thesis also consists of practice-based work, eg. artistic or pedagogical assignments or events.

The following chapter presents different structure models for reporting. These models can be applied in the report depending on the nature and problem setting of the project. In other words this means how and in which order the topic is discussed and how the focal point of the report is presented.

3.1 Structure models

A research-oriented project is constructed on the theoretical framework and practical solutions. The theoretical framework is essential when thinking of the empirical part and the choices made regarding the research; this means problem setting, choosing the methods, interpreting the results and drawing conclusions.

The structure of a research-oriented thesis is the following:
- introduction
- knowledge basis
- methods and material
- results
- discussion and conclusions

A practice-based report and a project report are practical theses. The report might not have any theoretical framework but it can be enclosed in the report as an appendix. The connection to the theoretical framework must become obvious in the practical decisions taken.

A practice-based report and a project report can be classified followingly:
- introduction
- overview of a phenomenon or description of an environment
- description of a product or action
- evaluation and discussion

Production type projects aim at planning and implementing a product or a service. The contents can be divided into different production phases and the project is constructed on these production phases.

A thematic (topic-based) report has the following structure:
- introduction
- topic1
- topic 2
- topic 3 etc
- conclusions

A thesis based on problem solution starts by describing and defining the problem. The thesis can alternate between the theoretical framework and practice. The essential content is the description of the process and the evaluation of the solutions.

A problem-based thesis has the following structure:
- introduction
- description of the material or the problem
- desciption of the problem solution process
- result and evaluation

The structure models are just main guidelines. The student can freely choose the structure that best fits their theses.

3.2 Starting points for writing the knowledge basis

A thesis always needs a theoretical framework which means a theoretical foundation that the research or development is placed on. Building the theoretical framework is done using previously written literature on the topic; articles in many languages and trustworthy Internet sources. The theoretical framework can also consist of expert interviews, lecture material and previous theses.

The literature used should be summarised for the thesis. Include also the thesis writer's own ideas and comments. In other words the author paraphrases the text they have written and refers to the source after the text. No text can be used without relevant reference; 'copy paste' is not allowed. Plagiarism is strictly forbidden. Plagiarism means presenting a script, article or text written by someone else as one's own piece of text without properly giving the source. It is also forbidden to copy directly any text even if the source was given. The theoretical framework only includes necessary information which means the information needed in the practical part. Unnecessary background information can be left out. No conclusions are drawn yet at this point.

The code of ethics for the thesis process can be found following the link in Optima: For student > Student's path > Studying at Centria UAS > Code of ethics. In case there occur any problems the Centria guidelines for plagiarism detection will be applied.

The theoretical framework can be written in many different ways. Here are three structure models that can be used in connecting theory with practice.

a) Research-oriented thesis

The thesis is clearly based on the theoretical framework and the practical study. The practical study is closely connected to the theoretical information and source literature.

b) Problem – solution oriented thesis

In a problem – solution oriented thesis the theoretical framework is integrated throughout the text. The thesis discusses the theoretical framework and the practice in turns keeping both of them in balance. The theoretical framework is paraphrased which means writing in your own words and the in-text references are given after each piece of text following the general principles of paraphrasing.

c) Working life report, project report

When writing a working life report or a project report the theoretical framework is not as comprehensive as in a research-oriented thesis but instead it includes all the information essential for the operations or services to be developed. The theoretical framework also includes the information needed in handling the material and using the research method.

4. REPORTING

This chapter discusses the instructions for writing and organising the different structural parts of the thesis (title page, abstract, concept definition, contents, references, appendices). Here are also instructions for writing the introduction, results and conclusions clearly and consistently.

4.1 Title page

The name of the thesis should be informative and interesting. A good title is short, clear and descriptive. The title can be divided into two: the main title which gives the topic and the subtitle which defines the viewpoint to the topic. For example: **DEVELOPING MANAGEMENT REPORTING** (main title) **Case City of Kokkola** (subtitle). (For a sample please see Optima: For student > Student's path > Final thesis and maturity test > Model for a title page.)

Below are the instructions for writing the title page:

Title page

Author's name 10 cm from the top of the page, font size 14 pt.
Between the author's name and the thesis title there is one empty line (font size 14 pt).
Title of the thesis, font size 16 pt, all capitals, bold.
Possible clarifying subtitle, font size 14 pt.
One empty line between the title and the subtitle.
All text written in bold on the title page.
Left margin 2.0 cm.
Top margin 2.5 cm.
Bottom margin 2.5 cm.
Right margin 1.5 cm.
The month and the year on the final line.
Line spacing 1.

There is a sample model for the title page in Optima. Follow the link: For student > Student's path > Final thesis and maturity test > Model for a title page.

4.2 Abstract

The abstract gives a comprehensive picture of the thesis. The abstract is written on its own page in the ready-made model. (The model can be found in Optima: For student > Student's path > Final thesis and maturity test > Abstract.) The abstract is declarative, short and uses passive voice. No abbreviations, symbols or typographical highlights are used, no references to pictures or tables are used. Key words are words describing the essential contents and they are listed in alphabetical order.

The abstract is not a list of sentences but the text is comprised of complete sentences. The abstract consists of:
- information on the commissioner
- topic and objectives
- main elements of the theoretical framework
- methods
- results and conclusions.

The abstract is written in past tense, if possible, especially when describing the author's own research work. The abstract should be clear enough to give a full understanding of the thesis so that it would not be necessary to read the whole report.

Below are the items in the abstract:

CENTRIA UAS logo in the header.
Line spacing 1.
Justified alignment.
Number of pages, eg. 30 + 3 if page number 30 is the last one and there are 3 appendices. The appendices can consist of several pages each.
Font size 12 pt.

4.3 Concept definitions

If there are complex professional terms, jargon or abbreviations that require definitions, a separate list with definitions is written. Possible abbreviations are also added in the list. Use line spacing 1.5. Concept definitions are added after the abstract on a separate page.

Below are short instructions for listing the concepts:

The heading in bold: **CONCEPT DEFINITIONS**
No logo in the header.
List is needed if the thesis has difficult concepts or abbreviations.
Line spacing 1.5.
Two empty lines beneath the heading.
Font size 12 pt.
Justified alignment.

4.4 Contents

The table of contents is called **CONTENTS**. It should be concise but informative. Well listed contents help the reader to see the structure and whole entirety of the thesis.

The contents can include headings on three levels only. Every subchapter's numbering starts where the previous level's text starts. All headings in the contents must match the headings in the text. It is recommended to create the table of contents automatically and thus ensure that the headings match the ones in the text. The font size is 12 pt. The last items in the table are **REFERENCES** and **APPENDICES**, these two have no chapter numbering. (For a sample model, see Optima: For student > Student's path > Final thesis and maturity test > Model for a table of contents.)

4.5 Introduction

Introduction is the author's own introduction of the topic and the contents of the thesis. In the introduction the author introduces the background and the objectives for the thesis report, confines the research, defines the research problems or introduces the development tasks and presents the main contents of the thesis. In the introduction the author presents their aims and objectives. Research questions can be presented in the form of questions.

The introduction presents the main source literature used in the report and clarifies the main concepts concisely. The scope of the introduction in a 50-page thesis report is 1.5-3 pages.

4.6 Results

The results of the thesis project are compared to the research problem, theoretical framework used and methods. When needed, the results can be shown as figures or tables. Pictures, figures and tables must be explained also in writing so that the main results and conclusions are clear to the reader.

4.7 Conclusions and discussion

In the final part, the discussion, the author first repeats the aim or aims for the research, the methods and the results. The author also assesses their own working and the methods used. The author should examine all the research problems that have been set in the beginning even if all questions have not been answered.

The conclusions and discussion give the commissioner of the research practical directives and instructions. Here the author also presents well argued further development ideas. The author should also state if the objectives set by the commissioner were met. The conclusions and discussion present the things learned so that future researchers can use them. It is important to check that all presented problems and questions have been answered. This is also the place for the author to critically assess their own written production.

4.8 References

The list of references is placed last before appendices. The heading is REFERENCES written in all capitals. All source material that has been used in the text is listed here. All sources for quoted figures and tables must also be listed. In-text references are used every time when referring to text written by someone else. Based on the name given as in-text reference the reader must be able to find the material in the REFERENCES.

4.9 Appendices

Appendices are eg. manuals, interview forms, tables and graphs that are part of the contents of the report including all other material that is not necessarily presented in the report. Appendices are the last part of the thesis report.

Appendices pages have no page numbering. Instead they are numbered separately: APPENDIX 1, APPENDIX 2 etc in the top right-hand margin. If an appendix consists of three pages, for example, they are marked: APPENDIX 2/1, APPENDIX 2/2, APPENDIX 2/3.

In the text the page number of the appendix is not mentioned when referring to the appendix, only the number of the appendix is mentioned (eg. APPENDIX 1). If referring to a figure in an appendix, mention only the appendix and its number, not the figure. For example: In recent years the number of international students in Finland has grown rapidly (APPENDIX 1).

5. LANGUAGE AND LAYOUT

The following chapter gives information on the language and layout. There will be instructions how to mark the headings, figures, tables and pictures.

5.1 Text layout

Font

Use font types Times New Roman 12 pt, Arial 12 pt or Palatino 12 pt.

Line spacing

Line spacing in text is 1.5. Line spacing 1.0 is used to write the title page, abstract, possible foreword, contents, references and longer direct quotations in the text.

Page numbering

Page number is marked at the top right-hand side of the page. Page numbering starts from number one on the introduction page and continues until the end of the references pages.

Margins

Top and bottom margins are 2.5 cm. Left margin is 2.0 cm and right margin is 1.5 cm. Use hyphenation. Use justified alignment. In REFERENCES use only left alignment.

Paragraphing

Leave one empty line between paragraphs. Write full lines. Vary the length of paragraphs. It is recommended to write 8-12 lines in a paragraph. After each heading there must be a minimum of two lines of text on the same page. If the paragraph continues on the following page, there must also be a minimum of two lines of text in the same paragraph. Paragraph spacing is 0.

5.2 Paragraph heading and numbering

The heading must be short, exact and descriptive. Start main chapters always on a new page. After each heading there must be text. When numbering the headings leave one space after the last number, no full stop. After the main heading leave two empty lines, after a subheading leave one empty line. After each paragraph leave two empty lines.

Write main headings in all capitals and subheadings in small letters. Bold all headings and use font size 12 pt. Notice that if a main heading has subheadings, there must be a minimum of two of them (for example: main heading 5, subheadings 5.1, 5.2) All headings should be numbered.

5.3 Figures, tables and pictures

Figures, tables and pictures are numbered as their own number series. TABLE is written above the table in all capitals. After that is written the number of the table and a full stop. After the full stop there is the name of the table and no full stop. FIGURE or PICTURE is written below

the figure or picture in all capitals, then the number, a full stop and the name of the figure or picture. There is one empty line between the table, figure or picture and the text. Musical note samples are marked just like figures or pictures and referred to as NOTE SAMPLE. (For example NOTE SAMPLE 1).

Figures, tables and pictures are referred to using their numbers. All directly quoted figures, tables and pictures must be adapted by the thesis writer/s. Original ones can only be used if the publisher has given permission. Unauthorized usage is a violation of copy right rules. After the name of the figure, table or picture there must be source reference. Adapted figures, tables and pictures also have the note 'adapted from'. The source reference is added after the name of the figure, table or picture. No full stop is used.

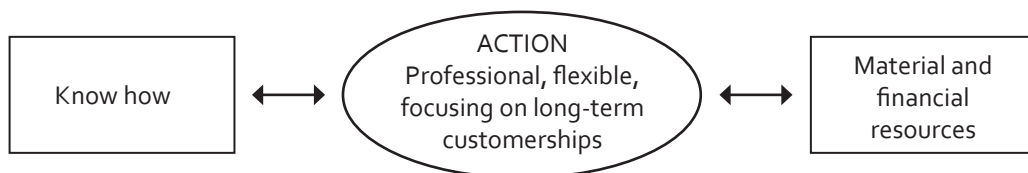Below are some samples of figures, tables and pictures:

FIGURE 1. Success factors producing competition advantages in a company (adapted from Anttila & Iltanen 2001, 27)

If a table continues on the following page, write (continues) on the lower right hand corner of the page. On the next page write the number of the table on the left and in brackets write the same word as on the previous page, for example TABLE 16. (continues).

When referring to a figure or a table, write FIGURE or TABLE in all capitals and in brackets. Sample 1: There were 37 respondents (TABLE 1). Sample 2: There were 37 respondents. 7 of them were male. (TABLE 1.) When referring to a picture, table or figure in a sentence, write figure, table or picture in small letters. Sample 3: In table 1 are presented the results of the questionnaire.

TABLE 1. Age groups of respondents (n = 37)

Age group	Women	Men	Total	%
Under 35	4	2	6	16,2
35–44	16	3	19	51,4
45–54	8	1	9	24,3
55–64	2	1	3	8,1
Total	30	7	37	100,0

Pictures, tables and figures are not an end in themselves. When used correctly, they give information concisely and descriptively. Pictures, tables and figures must be discussed and concluded in the text so that the conclusions do not remain separate from the context. If there are several pictures, tables or figures, they are listed in the references. (See Optima for model: For student > Student's path > Final thesis and maturity test > Model for a table of contents.)

Below is one sample of adding pictures to the thesis report (PICTURE 1).

PICTURE 1. Motorcycling in Finnish winter (Aho 2015, 15)

Below is one sample of adding a mathematical equation to the thesis.

In DC electricity the conductance showing the current leading feature of a component or a larger connection:

$$G = I / U$$

where I stands for the current going through the component and U stands for the voltage. The unit for conductance is siemens (S).

Equations are numbered in sequence and the terms for the equation are defined in the text after the equation.

5.4 Abbreviations

Abbreviations mean generally accepted shorter forms for frequently used long concepts in professional literature. For example ISDN stands for Integrated Services Digital Network.

When the concept is mentioned for the first time, the whole concept should be written and the abbreviation given in brackets, for example: Integrated Services Digital Network (ISDN). Once the concept has been introduced, it can be abbreviated without brackets, for example ISDN.

6. REFERENCES

The student must consider the choice of the sources carefully and have a critical approach to the sources. Primarily the sources should be reliable printed or electronic sources that provide the latest information on one's field of study. The sources can be, for example, books, research reports or articles related to the field.

Moreover, other theses, patents, standards, brochures on products, expert interviews and information given by authorities can be used as sources in a thesis. Sources that are vague and regenerated such as opinions presented on online chats are not to be used. In addition, if one cannot reliably assess the expertise and qualifications of the author, one should not use the source in the thesis. It is advisable to search information using several different databases in order to find the best possible sources for one's thesis.

In the thesis the sources are referred to using the name-year system. References in the text are short, and more detailed information on the source can be found in the list of references.

> Torkki (2007, 106) discusses how the speaker can affect the audience.
> A speaker that has good rhetorical skills can take the audience into account (Torkki 2007,35).

Whenever one refers to a text written by someone else, one must indicate the reference. The in-text reference includes the author's last name and the year of publication, followed by a comma and the page or the pages where the information is taken from. This in-text reference is written in brackets. If the entire work is referred to, page numbers need not be given.

Usually the source text is paraphrased in the thesis, i.e. the writer of the thesis writes about the source information in his/her own words and the reference is provided right after. It must be evident for the reader which part of the text is based on a source. The place of the full stop in the text indicates which part of the text is taken from a source.

If the reference covers **more than one sentence,** the source is marked after the text that discusses the reference in question and the full stop. The reference itself acts as a sentence of its own. In this case **one should also mark a full stop after the reference in the brackets.**

An example of a case where the reference covers more than one sentence:
The student knows how to refer to sources. He/she is careful and follows the instructions. This ensures that the reader knows which information is based on which source and which part of the text represents the student's own view. (Aro 2015, 21-23.)

If the reference covers only one sentence, the reference is included within the sentence. Thus, **the full stop comes after the brackets**.

An example of a case where the reference covers only one sentence:
This is easy (Aro 2015, 18).

One should avoid using direct quotes. In case a direct quote is used, it should be as short as possible. Primarily direct quotes are used when referring to laws or definitions. If one uses a direct

quote, it should be marked out from the rest of the text by using a 2.3 cm indentation on the left-hand side. The spacing in the direct quote is 1. The direct quote does not need to be marked with quotation marks.

If the reference has two authors, the last names of both authors are mentioned when giving the source. The names are joined by using the symbol & (Hall & Cresswell 2005, 5).

If the reference has three or more authors, the last names of all authors are given the first time when referring to the source (Reeves, Stevens & Young 2000, 21-22). However, in later references only the last name of the first author is given, followed by the abbreviation et al. (Reeves et al. 2000, 21-22).

If the information comes from several sources, all source references are placed inside one set of brackets and separated by a semicolon (Pearson & Robins 2007; Vogt 1997).

When referring to more than one publications by the same author, the publications are differentiated by the year of publication and are indicated in the order of publication (Black 2015, 2013). If two works have been published in the same year, they are differentiated with letters of the alphabet (Black 2001a, 2001b). The same applies to electronic sources such as websites published in the same year by the same organization (BBC 2015a; BBC 2015b).

When the name of the author is unknown, the name of the publication and the year of publication are cited, and in some cases also the publishing organization. This method is also used with journal articles when the author's name is unknown (Wall Street Journal 31 January 2013).

Moreover, laws and acts as well as committee reports etc. are cited using this method.
    (Polytechnics Act 9.52003/351)
    (Committee for corporate analysis 2005)

Source references to electronic sources, for example websites and electronic books are given as above. The references include the author's name and the year of publication. If the source has page numbers, they are given as well. A more detailed address of the source is included only in the list of references, not in the in-text reference.
    Internet site (Greene 2010)
    Electronic book: (Lee, Simmons and Singer 2009)

If no other author except the site address or organization responsible for site maintenance is found for an Internet site, then these are given in the citation. In case the organization producing the content is not known, only the title of the website is given in the citation.
    Website: (Finnish Library Association, 2010.), (YLE 2009.)
    Youtube video: (How aluminium cans are made 2015.)
    Facebook page: (K-Supermarket 2014.)

Secondary sources

It is part of good scientific practice to use primary sources. Sometimes, however, this is not possible. When the original source is referred to in another text and one wishes to refer to the original source, we talk about using the so called secondary sources. It should always be clear for the reader if secondary sources are used. The secondary source is written in square brackets. Both the primary and secondary source must be listed in the list of references.

Lewin's [1951; 1958] well-known model of change consists of three stages (Hitt, Miller & Colella 2009, 493).

The change process of an organization can be divided into three stages (Hitt, Miller & Colella 2009, 493 [Lewin 1951; Lewin 1958]).

In the list of references secondary sources are listed as follows:

Hitt, M.A., Miller, C.C., & Colella A. 2009. Organizational Behaviour: A Strategic Approach, 2nd Edition. Jefferson City: John Wiley & Sons, Inc.

Lewin, K. 1951. Field theory in social science. New York: Harper & Row.

Lewin, K. 1958. Group decisions and social change. In E.E. Maccoby, T.M Newcomb & E.L. Hartley (ed.) Readings in social psychology, 3rd Edition. Austin, TX: Holt, Rinehart & Winston, 201-216.

Checking the thesis for plagiarism

All completed theses are checked for plagiarism to make sure that the theses do not violate the copy rights. The Urkund system is also used for detecting plagiarism.

7. COMPILING THE LIST OF REFERENCES

After the actual text has been written, the student draws up the list of references, which is titled REFERENCES and capitalized. All sources mentioned in the thesis are included in the list of references without any sub-headings, and they are listed in alphabetical order according to the writer's last name. The reader must be able to find the source in the listed references according to the name given in the text. Thus, the in-text reference must correspond to the source mentioned in the list of references.

The list of references provides the bibliographical data that are necessary for locating the publication. This data include, for example:
the author's last name, the initial letter of the author's first name
the year of publication
the title of the publication
the edition used, if there are several editions available
the place of publication and the name of the publisher.

For example:
> Yule, G. 1996. The study of language. 2nd edition. Cambridge: Cambridge University Press

When using electronic sources, one must particularly pay attention to the reliability of the source, the permanence of the source, the availability of the document and the copyright issues. The electronic sources are marked in the list of references following the same practice as with other sources. However, if there are no page numbers or publisher information available, they are not marked. If the author is known, the last name of the author as well as the year of publication are written first both in the in-text reference and in the list of references. If the author is not known the document name or the title of the web page together with the year are marked in the in-text reference.

The list of references should also include the following information:
- where the document is available (the exact Internet address where the source is available)
- the date the electronic document has been created and possibly modified
- the date when the document has been accessed and it has been referred to

For example:
Krigsman, M. 2009. Social CRM. Shifting power and rapid burn. Available: http://www.zdnet.com/blog/projectfailures/social-crm-shfting-power-and-rapi-burn/5367. Accessed 12 October 2014.

The following chapters provide examples of listing different types of sources in the list of references.

7.1 A book

A printed book is marked in the list of references as follows:
Author's last name, the first letter of the author's first name. Year of publishing. Name of the book. Edition (if more than one). Place of publishing: Publisher.

Giddens, A. 1991. Modernity and Self-Identity. Self and Society in the Late Modern Age. Cambridge: Polity Press.

Zemach, D & Rumisek, L. 2005. Academic writing from paragraph to essay. Oxford: Macmillan.

Trzeciak, J. 2003. Study skills for academic writing. Student's book. Essex: Longman.

7.2 An article in an edited work

When adding an article published in an edited work in the list of references the following information is included:

Author's last name, the first letter of the author's first name. Year of publishing. Name of the article. The whole name of the edited work, the first letter of the editor's first name, editor's last name. Place of publishing: Publisher, page numbers of the article in the work.

Döös, M. 2007. Organizational learning. Competence-bearing relations and breakdowns of workplace relatonics. In L. Farell & T. Fenwick (eds.) World Year Book of Education 2007. Educating the global workforce. Knowledge, knowledge work and knowledge workers. London: Routledge, 141-153.

7.3 A journal, magazine or newspaper article

If an article has been published in in a journal, magazine or newspaper, it is marked in the list of references as follows:

Author's last name, the first letter of the author's first name. Year of publishing. Name of the article. Name of the journal/magazine/newspaper, volume, issue, page numbers of the article in the journal/magazine/newspaper.

Takase, M., Maude, P & Manias, E. 2004. Explaining nurses' behaviour from their perception of the environment and work values. International Journal of Nursing Studies 44, 171-174.

Leppisaari, I., Kleimola, R., Herrington, J., & Hohenthal, T. 2014. Developing More Authentic e-Courses by Integrating Working Life Mentoring and Social Media. Journal of Interactive Learning Research 25(2), 211-236.

7.4 A report and a committee report

Reports and committee reports are marked in the list of references as follows:

Author's last name, the first letter of the author's first name. Year of publishing. The whole name of the work. Place of publishing, publisher, publication series and its number. (Note that one does not need to write the year twice unless it is included in the numbering of the series.)

EVA's Global Scenarios. Playing fields in the future. 2009. Finnish Business and Policy Forum EVA. Helsinki.

Mullins, G. & Kiley, M. 2002. It's a PhD, not a Nobel Prize. How experienced examiners assess research theses. Tampere: University of Tampere. Studies in Higher Education 27.

7.5 A thesis or a research report

When using final theses, Master's theses, Licentiate theses, Doctor's dissertation or other research work as a source, they are marked in the list of references as follows:

Author's last name, the first letter of the author's first name. Year of publishing. Name of the thesis. Information on the publisher or the educational institute. Possible name of the publication series and its number. The type of research work (Master's thesis, Doctor's dissertation etc.).

Ahmadian, A. M. 2015. Modeling contetation behavior of machine-type devices over multiple wireless channels. Tampere: Tampere University of Technology. Master of Sciences Thesis.

Kemppainen, J. 2006. Turnip, rape and mustard in the production of biodiesel. Central Ostrobothnia University of Applied Sciences. Bachelor's thesis.

Pajunen, L. 2001. Activating lead anodes with metal oxides. Helsinki University of Technology. Department of Materials Science and Rock Engineering. Otaniemi. Master's thesis.

7.6 Regulations (laws, decrees)

Regulations refer mainly to laws, decrees or government motions. In the list of references they are marked with detailed information, similar to other sources but without the author's name: Name of the law/decree. Date of passing the law / Number. The work/place where the law/decree is available.

Polytechnics Act. 9 May 2003/351. Available: http://www.finlex.fi/en/laki/kaannokset/2003/en2 0030351?search[type]=pika&search[pika]=university%20of%20applied. Accessed 16 Sep 2015.

Personal Data Act. 22 Apr 1999/523. Available: http://www.finlex.fi/en/laki/kaannokset/1999/ en19990523. Accessed 3 Jun 2015.

7.7 A standard

As for standards, established abbreviations are used. For example, the abbreviation for Finnish Standard Association is SFS. When listing standards in the list of references, first there should be the number of the standard, and after that the name of the standard as well as the year of establishing the standard.

SFS 5342. Bibliographical references. 1992. Helsinki: Finnish Standard Association SFS.

7.8 A patent

Patents are marked in the list of references as follows:

Author's last name, the first letter of the author's first name. Year patented. Organization that owns the patent. Name of the patent. Country where patented and patent number (under which the patent can be found in the patent register).

Melcer, S. 2006 SOFUN. Physical exercise machine. USA. US2006252612.

7.9 Works with no author given

The sources with no author given are referred to in the text with the name of the publication. In the list of references such sources are marked as follows:

Name of the work / article / or the title of the webpage or the name of the publishing organization. Year of publishing / updating (or the year when accessed if there is no information available on the year of publishing / updating). Other information depending on the type of the source.

High-strength. 2010. High-strength stainless steel motorcycle frame developed. Available: http://outokumpu.com/pages/. Accessed 19 December 2011.

White Paper on Education and Training. Towards the Learning Society. 1995. Available: http://ec.europa.eu/education/lifelong-learning-policy/doc28_en.htm. Accessed 25 May 2014.

7.10 Audiovisual materials

TV programs, films, video clips and other types of audiovisual materials can also be used as sources in a thesis. When using such a source, one should check the reference information from the so called metadata of the source. This can be, for example, the title page, home page, record cover or metadata embedded in the source. Sometimes the metadata can be, for example, the back of the title page, title, cover, label, description of the illustrated work as well as TV and radio program listings.

Drama, theatre and learning. 2001. Educational television Katarsis series programme 1/6. Scriptwriter M. Kilpeläinen. Editor and producer M. Kilpeläinen. YLE Open University. TV1. Broadcast 30 Sept 2001.

The Corporation. Talk, learn, act. 2004. A film by Achbar, M., Abbott, J. and Bakan J. Production: Big Picture Media Corporation. New York: Zeitgeist Films Ltd.

Lehmann-Brauns, A. 2010. Chambers of Illumination. Photograph. Available: http://www.goethe.de/kue/bku/kpa/en3405951.htm. Accessed 28 December 2010.

How It's made Aluminium Cans (Sam's Club Choice). 2015. Video on Youtube. Available: https://www.youtube.com/watch?v=V7YozAzoggY. Accessed on 29 March 2015.

7.11 Personal notifications

Personal notifications such as interviews of experts and phone calls are marked in detail in the list of references, following the same principles as with other sources.

Viljanen, M. 2004. Interview of Communications Manager. 1 April 2004. Digital Equipment Corporation Ltd Helsinki.

Vlaescu, G. 2010. Scandinavian technology partner. Email georgevlaescu@emmerce.net 15 Feb 2010. Printed 23 Feb 2010.

7.12 Special cases

a) Leaving out the year of publishing

If it is not possible to indicate the year of publishing in the list of references, as is often the case with electronic sources, one can leave out the year of publishing both from the list of references and in the in-text references.

b) Electronic articles with no permanent online address

In some cases an electronic article does not have a permanent online address. With these kinds of sources the address where the article is available is marked based on the day when the article was accessed and referred to.

Gupta, S. 2013. National Health Portal. Available: http://www.slideshare.net/sauravgupta84/national-health-portal. Accessed 27 September 2015.

c) Electronic publication with no author indicated

Papermaking. Article on the website of Metsopaper Oy. Http://www.metsopaper.comp, papertechnology, papermaking. Accessed 16 April 2009.

8. RESEARCH LITERATURE

There is plenty of literature available on researching and research reporting. Links providing information on writing a thesis can be found at: https://www.pinterest.com/centriakirjasto/tut-kimuskirjallisuutta/.

9. PUBLISHING THE THESIS

A thesis is always a public document. This is based on the Act on the Openness of Government Activities 621/1999 and instructions given by Ministry of Education and Culture.

However, if the thesis includes a confidential section, the nature of this section's content should be indicated in the abstract. The confidential section that remains with the contractor is attached as a separate appendix.

The publicity of a thesis can be restricted only in case of material that is determined confidential by law. Any decision by the university of applied sciences concerning the confidentiality of a thesis is based on the Act on the Openness of Government Activities (621/1999). This act defines confidential for example documents that contain information considered as business secrets (if the party the document concerns does not give permission). In cases of patenting inventions the legislation concerning inventions in institutions as well as general patenting legislation is followed. Copyright issues are decided by general copyright legislation.

TABLE 2. Different actors in the thesis process and their duties

Different actors in the thesis process and their duties		
Student	University of applied sciences	Commissioning party
familiarizes him/herself with guidelines and instructions given in *Guide for Thesis Writing*	is responsible for thesis-related practices	participates in defining the objectives of the thesis project with the student and the supervising teacher
finds a subject for the thesis and gets approval for the subject	approves the subject of the thesis and the thesis project plan	signs a cooperation agreement for the thesis
agrees on the commissioning of the thesis with Centria UAS and the commissioning party. (See model in Optima: For student – Student's path – Final thesis and maturity test – Thesis contract)	appoints the supervising teacher(s)	promotes the progress of the thesis project by providing necessary information and data; provides supervision from the point of view of the organization commissioning the thesis
draws up a plan for the thesis project	signs a cooperation agreement for the thesis	gives written feedback on the thesis
draws up the timetable for the thesis project, follows the timetable and revises it if necessary	arranges thesis seminars	
contacts the supervisors as agreed and negotiates with them on the possible changes	supervises and guides the learning process and the student's ethical solutions and provides help in problematic issues through supervisory meetings, reception hours and seminars	

gets the supervisor's approval for any material distributed externally, for example questionnaires	informs the student and the commissioning party on the practices in case the background material of the thesis includes material considered classified	
participates in seminar working	assesses the thesis and the maturity test	
is responsible for the outcome of the work	checks the correctness of the item records before publishing the thesis in Theseus	
documents the thesis according to the instructions on reporting		
evaluates his/her own thesis and the whole thesis process		
asks for feedback from the commissioning party		
delivers the final version of the thesis with appendixes to the teachers and reports the approved thesis in Theseus		
takes the maturity test		

10. DESCRIPTION OF THE THESIS WRITING PROCESS

Important factors contributing to a successful thesis include a good subject, the student's familiarity with the subject area, project planning, successful time management, cooperation and interaction skills, documentation skills and process supervision. Indicators that are used in evaluating the process include the grade (1–5) and the duration of the project in weeks. The degree programme team is responsible for the development of the thesis writing process. Figure 2 shows the process description.

Start-up data:

Proposal by student

Process stages:
1 Approval of thesis subject

Thesis database

Advising:

Proposal form/
Commission
Criteria for approving
the subject
Guide for Thesis Writing

2 Planning of implementation

Implementation plan

Structure of thesis
Description of present stage
Description of objectives
Description of methods
Project plan (for example language)

3 Implementation of thesis project

Reports
Drafts etc.

Guide for Thesis Writing
Reportings
Feedback

4 Assessment and approval of thesis

Grade (Winha)
Assessment statement

Assessment criteria
Assessment statements by the supervisor and the working life representative and self-evaluation by the student

Seminars

Outcomes:

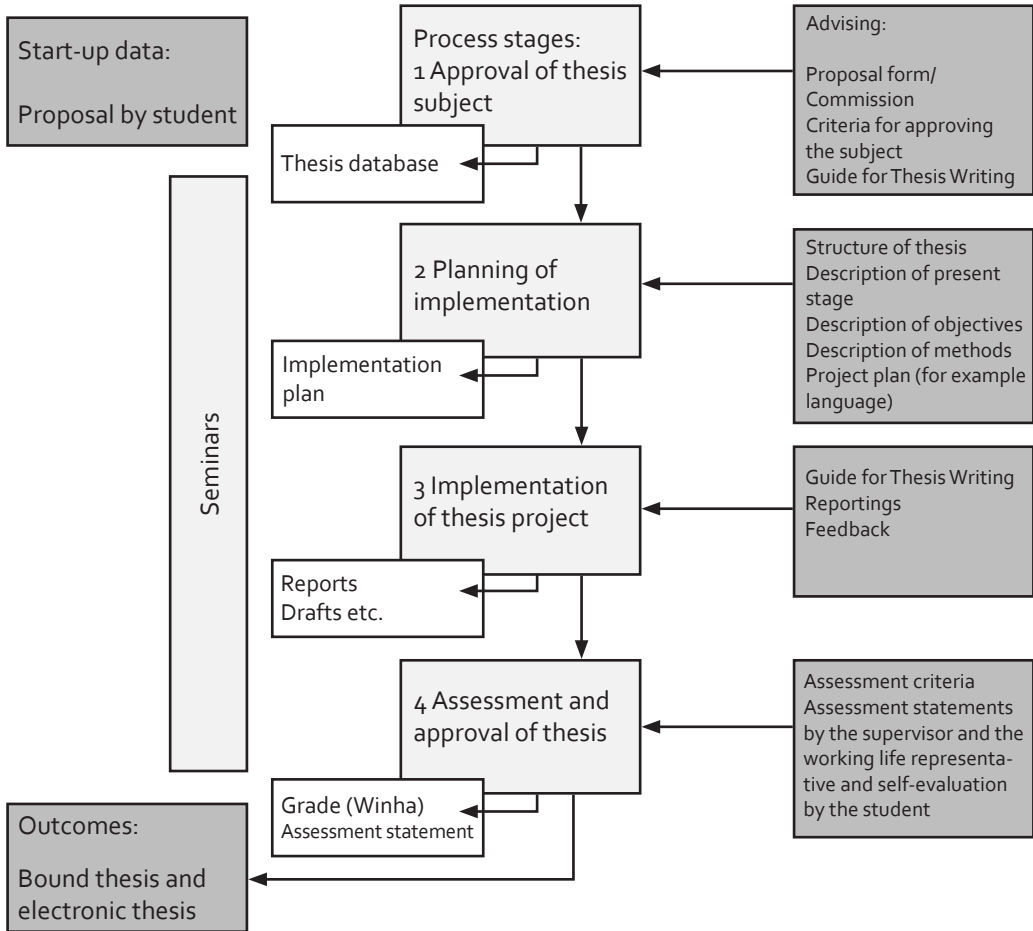Bound thesis and electronic thesis

FIGURE 2. Thesis Process Description

11. EVALUATION

In the evaluation of the thesis the focus is on the following:
• setting of the objectives
• theoretical framework and references
• planning of the thesis project
• execution or outcome of the thesis
• written presentation
• process management.

The evaluation criteria are described on an evaluation scale (Table 3). The evaluation covers the entire thesis process and thus the grade is not only based on the average of each sub-area. The evaluation form has space for free worded evaluation comments in which each criterion can be dealt with in more detail. In the form there is also space for the evaluation by the working life representative. The student also evaluates his/her own performance using a separate self-evaluation form.

TABLE 3. Assessment scale

Assessed sub-area	Satisfactory 1	Satisfactory 2	Good 3	Good 4	Excellent 5
1. Setting of objective(s)					
Working life orientation Significance and topicality of the subject Objectives, specifying the tasks Delimiting the scope of research	The objectives of the study can be identified but are not clearly stated. The scope of the thesis is poorly delimited. The necessity of the study is poorly justified.	Existing information has not been utilized in setting the objectives. The objectives of the thesis are realistic. The theoretical framework is narrow.	The subject is working life oriented. The objectives are clear and realistic. The structure of the thesis is presented and the solutions are justified in case the structure is different from the ordinary.	The study is professionally interesting. The objectives are carefully set on the basis of a thorough needs analysis. The theoretical framework is valid and justified for the outcome of the project.	The study develops the student's professional knowledge and creates added value for the business that has commissioned the study. The thesis is innovative. The subject is examined from a new perspective.
2. Planning of the thesis process					
Implementation Research methods Timetable	The plan is superficial or it has not been documented at all.	The plan is not completely logical or it has deficiencies.	The plan is consistent and logical. The plan is feasible, but the choices are not sufficiently justified. The responsibilities and the stakeholders are defined.	The plan is justified and realistic. The plan takes into account the factors that are critical for the objectives of the thesis. The justifications and consequences of the choices are discussed.	The plan utilises the theoretical framework skillfully. The plan is flexible, balanced and objective.
3. Theoretical framework					
Appropriateness Logic Critical approach Diverse use of source material Concept definitions Coverage	The theoretical framework is not appropriate. The student's knowledge of the subject area is limited. The use of sources is scarce and the sources are used inconsistently and in a one-sided way. The key concepts are poorly defined. The theoretical framework covers poorly the setting of the research or development task.	The theoretical framework is inconsistent and narrow. The sources are used haphazardly. The sources consist mainly of course books and second-hand sources. The definitions of concepts are inadequate.	The theoretical framework is constructed appropriately for the outcome of the study. The use of sources is uncritical and ungrounded but still versatile. The key concepts are rather well defined.	The theoretical framework is logical and comprehensive. The sources are critically used and well integrated with each other. The sources conduct a dialogue.	The theoretical framework is extensive and well justified. The framework includes a sufficient range of new, reliable first-hand sources. Sources published in foreign languages are also used. The key concepts are very well defined. The framework covers very well the setting of the research or development task.
4. Outcome of the thesis					
Reaching the objectives Presenting the results and conclusions	The outcome does not meet the set objectives. The outcome is poor. The documentation of the implementation or the outcome is inadequate.	The outcome meets the set objectives only partially. The implementation of the outcome is inadequate. The documentation of the implementation or the outcome is mostly done well.	The outcome is implemented following the standard solutions and mainly complying with the generic quality concepts of the professional field. Knowledge and research data on the subject area are utilized. The target group has been taken into account in the implementation.	The outcome is a justified entity and the implementation is logical. The outcome and discussion of the study relate well to the theoretical framework. The evaluation of the outcome is systematical.	The outcome is justified and inventive. The theoretical framework is critically utilised in evaluating the outcome.
5. Written presentation					
Logical structure Finalised according to the given guidelines Correct style and language	The report text is intelligible but not easy to read. The text does not fully follow the expected style register. The organization of text is inconsistent. The layout or the length does not comply with the guidelines. Figures and tables (and pictures/recordings) are of poor quality or ambiguous, or the thesis lacks necessary figures and tables. Sources and references are not indicated appropriately.	The organisation of the report has lacks. The text has errors but it meets the requirements set for the style register. Figures and tables (and pictures/recordings) are flawlessly presented but fail to add significant value to the study, or the thesis does not include any illustration. There are some flaws in layout and language.	The organisation of the report is logical. The text is fluent and follows the expected style register. The figures and tables (and pictures/recordings) add value to the study. The sources and references are indicated appropriately. The layout mostly complies with the guidelines.	The organisation of the report is clear and logical. The text is fluent and follows the expected style register. Figures and tables (and pictures/recordings) are of good quality and clearly add value to the study. The layout follows the guidelines.	The organisation of the report is flawless, clear and well-connected. The text is fluent and follows the expected style register. The figures and tables (and pictures/recordings) are of high quality and they clearly add value to the study. The layout follows the guidelines flawlessly.
6. Process management					
Independence of working Time management Utilising the instructions and guidance Presentation of the thesis project	The thesis process lacks independence. The student has utilised the provided guidance and instructions only to some extent. Problems related to process management have caused delays in the thesis project.	The provided guidance and instructions are utilised partly. The thesis process is completed with support of guidance.	The provided guidance and instructions are reasonably utilised. The process is well managed in terms of timetable. The student evaluates his/her own learning.	The provided guidance and instructions are utilized in a fluent, independent and extensive way. The project is a well-managed entity from the beginning till the end. The student skillfully evaluates his/her own learning.	The student has demonstrated excellent skill of process management. The study is innovative, creative and inventive. The student evaluates his/her own learning in a very skillful way.

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GUIDE FOR THESIS AND ACADEMIC WRITING

The thesis indicates a student's expertise in understanding, applying and producing professional results in their own field. At its best the thesis is a bridge between studies and working life.

This guide gives information following the general principles for thesis written in national working groups in 2005-2006. The guide can be applied in all degree programmes in Centria University of Applied Sciences. In addition, each field also has their own practices that will be explained in thesis seminars in more detail.

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