

## BACHELOR'S THESIS INSTRUCTIONS

## FOREWORD

These instructions for the preparation of a Bachelor's thesis describe issues which are typical of Bachelor's theses prepared at the Oulu University of Applied Sciences. The instructions may later be supplemented with material specific to different degree programmes. Separate instructions will be provided for Master's theses.

The instructions are based on the output of the project on the development of Bachelor's theses ([www.oamk.fi/opinnaytehanke](http://www.oamk.fi/opinnaytehanke)). The instructions were prepared by a working group whose members were:

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and as an invited expert

Tiitto-Komminaho Seija, lawyer, Oulu Region Joint Authority for Education (OSEKK).

The request for an opinion on the draft of the Bachelor's thesis instructions was considered at the meeting of the Working Group on Study Affairs on 16 December 2008. An opinion was requested from the schools and from the Student Union of Oulu University of Applied Sciences (OSAKO). Seven schools responded to the request. The working group considered the opinions at its meetings (23.4.2009 and 2.6.2009) and, based on them, made changes to the Bachelor's thesis instructions.

The Bachelor's thesis instructions in English differ from the instructions given in Finnish. Firstly, the Senior Information Specialist Katja Kivimäki and Information Specialist Leena Ojala from the Library of Business and Information Management have participated in the selecting of the examples for the Bachelor's thesis instructions in English. Secondly the abstract in Finnish is optional in the Bachelor's theses written in English. In addition, hyphenation is not used in the Bachelors theses that are written in English.

Oulu, October 2009

*Bachelor's Thesis Working Group*

The Bachelor's thesis instructions were approved by the rector's decision 15.6.2009 § 186. The feedback on the instructions received during the academic year 2009–2010 was collected and discussed at the meetings of the Bachelor's Thesis Working Group (14.10.2009, 22.1.2010, 19.3.2010 and 24.5.2010). The reporting guidelines for Bachelor's theses were ratified by the rector's decision 22.6.2010 § 176. The rector's decisions (15.6.2009 § 186 and 22.6.2010 § 176) authorise the director of study affairs to approve possible alterations to the Bachelor's thesis instructions. The alterations made to the instructions will be compiled into a separate document.

Oulu, 16.8.2010

*Anne Anttinen*

*Director of study affairs*

The feedback on the instructions received during the autumn term 2010 was collected and discussed at the meetings of the Bachelor's Thesis Working Group 1.10.2010 and 10.12.2010. The rector's decision (15.6.2009 § 186) authorized the director of study affairs to approve possible

alterations to the Bachelor's thesis instructions. The alterations made to the instructions will be compiled into a separate document.

Oulu, 10.12.2010

*Anne Anttinen*

*Director of study affairs*

The feedback on the instructions received during the spring term 2011 was collected and discussed at the meetings of the Bachelor's Thesis Working Group 11.2.2011, 16.3.2011 and 20.5.2011. The rector's decision (15.6.2009 § 186) authorized the director of study affairs to approve possible alterations to the Bachelor's thesis instructions. The alterations made to the instructions will be compiled into a separate document.

Oulu, 20.5.2011

*Anne Anttinen*

*Director of study affairs*

The feedback on the instructions received during the autumn term 2012 was collected and discussed at the meetings of the Bachelor's Thesis Working Group 14.9.2012 and 30.11.2012. The rector's decision (15.6.2009 § 186) authorized the director of study affairs to approve possible alterations to the Bachelor's thesis instructions. The alterations made to the instructions will be compiled into a separate document.

Oulu, 27.3.2013

*Anne Anttinen*

*Director of study affairs*

The feedback on the instructions was discussed at the meetings of the Bachelor's Thesis Working Group on 16.5.2013, 20.9.2013, 29.11.2013 and 14.2.2014. As a guest expert, a senior lecturer of communication has also participated in the preparations. The rector's decision (15.6.2009 § 186) authorized the director of study affairs to approve possible alterations to the Bachelor's

thesis instructions. The alterations made to the instructions will be compiled into a separate document.

Oulu, 19.3.2014

*Anne Anttinen*

*Director of study affairs*

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# 1 INTRODUCTION

"The purpose of the Bachelor's thesis is to develop and demonstrate a student's ability to apply his knowledge and skills in a practical expert task related to his professional studies" (Ammattikorkeakoulun vararehtori 2014). The Bachelor's thesis is either a research or activity-based development task. In the development task the student puts into practice existing knowledge acquired through research or practical experience (cf. Tilastokeskus 2012). New knowledge is used to create new products, services, production processes or methods, or to fundamentally improve existing ones (ibid). A Bachelor's thesis may be:

- a product development task (for example a concrete product: manuals, tools or service products)
- a method development task (for example work methods)
- a planning task (for example computer software, trade fairs/events, equipment)
- a research task (for example reports, surveys, evaluations)
- an artistic work (for example concerts).

The scope of the Bachelor's thesis is 15 credits, that is on average 400 hours. An exception to this is the Degree Programme in Construction Management, where the scope of the Bachelor's thesis is 10 credits, in compliance with national guidelines. The work done by the student includes independent study, seminars and guidance discussions. It is possible to prepare the Bachelor's thesis either individually, together with another student or as a member of a group. In case of pair work or group work the division of duties must be such that each student demonstrates his overall mastery of the Bachelor's thesis process and his individual competence (Oulun seudun ammattikorkeakoulu 2006, 5).

In preparing the Bachelor's thesis students learn to recognize both important sets of problems within the professional area in question, alternative solutions to them and the demands of working life and its development. In the thesis students apply scientific knowledge and work methods to their own field in new and changing situations. They also learn to communicate orally and in writing on questions related to the area of research, learn theoretical and communication technology skills and learn to take into consideration ethical viewpoints and to act accordingly. (Ibid, 6.)

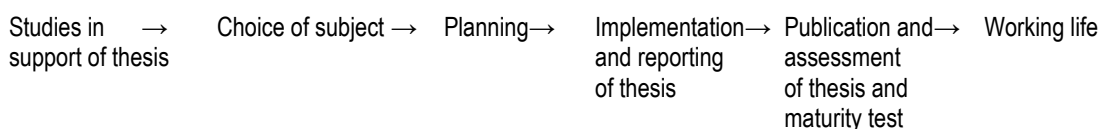
The Bachelor's thesis is the student's visiting card to working life and a possible future job. Consequently, most Bachelor's theses prepared at universities of applied science are made in cooperation with a client. This means that a written agreement has been signed agreeing that

- a client pays either the student or the university of applied sciences for the work and/or
- the supervisor of the thesis represents the client and/or
- the work community intends from the beginning to utilize the results of the Bachelor's thesis in its own activity (OKM:n ammattikorkeakoulujen tiedonkeruukäsikirja 2013. 2014).

You can also prepare the Bachelor's thesis for your own company or develop your own business idea in your thesis.

The Bachelor's thesis always includes a written report. Bachelor's theses are public once they have been accepted as a study attainment (Opetusministeriö 2004). A Thesis written for a prior degree cannot be accepted as the Thesis required for the current degree. However, a Thesis that is part of a prior degree can be used to compensate for other studies in the current degree in accordance with the learning outcomes. (Ammattikorkeakoulun rehtori 2012.)

Students' competence for preparing a Bachelor's thesis grows throughout their studies. Such skills are for example expertise acquired in professional studies, information acquisition and processing skills, as well as communication and interaction skills. The Bachelor's thesis is a creative work process for the student, involving deliberation, uncertainty and joy of discovery (Nummenmaa & Lautamatti 2004, 25). The Bachelor's thesis is part of a university of applied sciences degree and its preparation (see figure 1.) is work like all other studying. The Bachelor's thesis is prepared and implemented in interaction with the supervisor, the client and other students.



*FIGURE 1. Bachelor's thesis process in simplified form*



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*For further consideration!*

- *What kind of a Bachelor's thesis will be useful for me in my future job?*
  - *What kind of objectives should I set for my thesis?*
  - *What strengths and resources do I possess?*
-

## 2 CHOICE OF SUBJECT

The subject for the Bachelor's thesis is chosen in the field of professional studies. Cross-disciplinary theses prepared as a part of a project are possible when the viewpoint is within the area of the student's professional studies (Oulun seudun ammattikorkeakoulu 2006, 7). The idea for a subject may originate from

- practical activity and experience
- assignments or research and development projects
- literature and previous research
- suggestions by experts
- topical themes in the professional field.

It is possible to get a subject for the Bachelor's thesis from companies, public sector organizations, universities of applied sciences and associations. It is advisable to have a tentative plan in mind before contacting an organization. Meeting the client is comparable to applying for a job. For this reason it is beneficial to have a clear idea of one's own strengths, study attainments and future goals (Lumme, Leinonen, Leino, Falenius & Sundqvist 2006, cited 12.11.2008). You can familiarize yourself with a company or organization through its website, annual and financial reports and brochures (ibid).

The theses completed at the Oulu University of Applied Sciences are available on the Open Repository Theseus ([www.theseus.fi](http://www.theseus.fi)) or at the libraries of Oulu University of Applied Sciences ([www.oamk.fi/kirjasto](http://www.oamk.fi/kirjasto)). The subjects, authors and abstracts of the theses are also available on the library's Leevi database ([leevi.amkit.fi](http://leevi.amkit.fi)).

A good subject for a Bachelor's thesis is characterized by:

- possibility for a well-defined development/research task
- possibility to utilize existing theoretical foundation and earlier research in the field
- suitability of the demands and definition of the subject to the competence and resources of a student at an institution of higher education (time, money, physical and mental resources, knowledge)
- importance to own educational field and own professional growth
- enduring personal interest in the subject

- topicality and newness
  - importance to working life and practical usability
  - connection to own experience in practical training and working life.
- 

*For further consideration!*

- *What kind of subject for the Bachelor's thesis interests me based on my practical training/work experience?*
  - *What kind of special skills do I have to learn for the subject? Is the subject interesting enough for me to be willing to go through with it? Do I have the time for it?*
  - *What kind of Bachelor's thesis subject will enhance my employment opportunities?*
-

### **3 PLANNING**

The planning is an important and time-consuming stage in the Bachelor's thesis process. It is beneficial to start planning the thesis in good time, so that for example in your professional studies you can select study modules that support the Bachelor's thesis process. After the planning stage you will have a plan for the Bachelor's thesis, which should include for example:

- definition of the subject, the reasons behind it and choice of viewpoint
- purpose and objective of the thesis
- description of the development/research task
- description of the operational environment
- main sources
- definition of core concepts
- selection of research method and gathering of material
- drawing up a schedule
- division of duties, if there are more than one authors.

The Bachelor's thesis plan can be used to evaluate for example how realistically the thesis can be realized. The plan may be changed during the course of the work by mutual consent of the different parties.

#### **3.1 Development task and methods**

When planning the implementation of the Bachelor's thesis essential issues are the definition, outlining and stages of the development/research task. A well-defined development/research task facilitates meaningful implementation of the other stages of the process. When you know what questions you want answered, you can choose the right theoretical approach. It is advisable to find out where you can find the information in question and to evaluate methods that are both reasonable and practicable with respect to the resources at hand. In the thesis it is essential that the different parts are in balance and connected to one another. This means that the development/research task, the methods and the material are mutually compatible. During the various stages of the thesis process it is important that everything that is necessary is done and it is done in a practical order.

All degrees in universities of applied sciences include studies in research and development methods. On the basis of what students learn during these studies they select methods that they master and that are suitable for use in a Bachelor's thesis. It is possible to gather research material for example through questionnaires, interviews, observations, experiments or by storytelling methods. Interviews and other gathered material are saved and kept until the assessment of the thesis. In a development task it is also possible to utilize material gathered or produced by others.

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*For further consideration!*

- *What is the aim and central idea of your Bachelor's thesis?*
  - *For whom is your thesis significant?*
  - *What is the connection between your thesis and working life?*
- 

### **3.2 Acquisition of information**

A theoretical foundation is built for the Bachelor's thesis. Figure 2 illustrates the theoretical foundation and the frame of reference. Formal knowledge (theory) refers to conceptual knowledge that has been published in scientific articles and literature. The theoretical foundation doesn't have to be confined only to formal knowledge if documented practical and empirical knowledge is available. (Vuorijärvi & Boedeker 2007, 175–176.) Practical knowledge refers to operational models that are used at workplaces. Empirical knowledge is generated gradually in practical work. Thus knowledge acquires personal meaning. (Helakorpi 1999, 14–15.) The frame of reference functions as a bridge between existing knowledge and the problem at hand. It also helps to adopt and create the language and terminology relevant to the subject. (Vuorijärvi & Boedeker 2007, 177.)

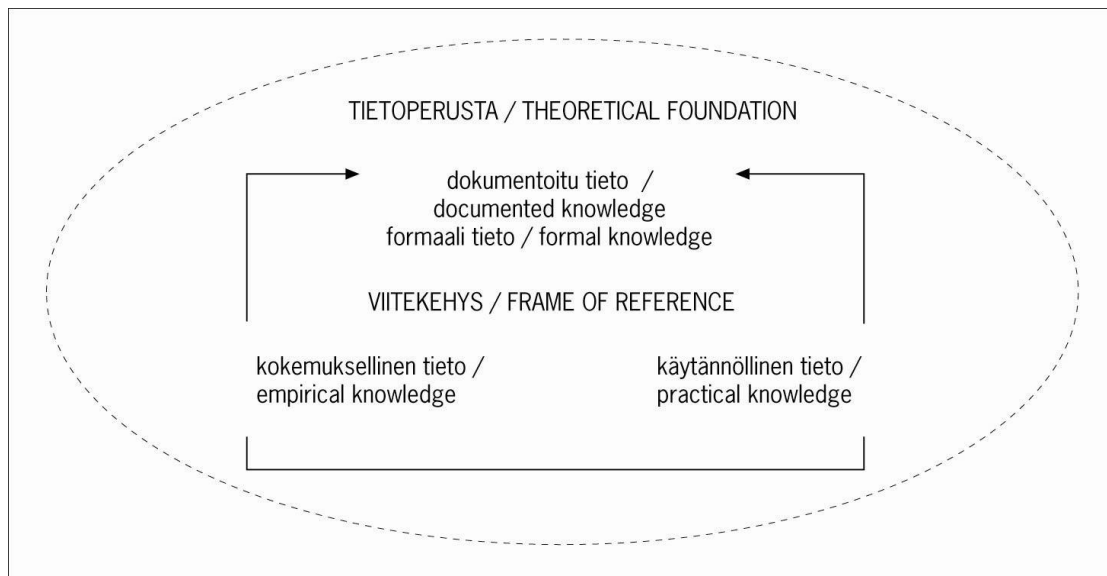


FIGURE 2. Theoretical foundation and frame of reference (revised Vuorijärvi & Boedeker 2007, 176)

By reading theoretical literature and earlier research students acquire necessary knowledge about the subject and find out what is already known about it. Theoretical literature is also needed to justify the choice of subject, viewpoint and research method. Especially in the discussion part of the thesis own results are examined in light of theoretical literature, and thus own observations and conclusions are linked with existing knowledge. When familiarizing yourself with sources it is advisable to make notes, so that the information required for the list of references and in-text references is readily available when writing the report.

The most important knowledge can still be found in research publications, that is in article compilations and scientific journals, where the most recent research findings are generally published. Many research publications are published both in print form and in electronic form on the Internet. Other sources of information can be product brochures, technical specifications, memoranda, reports, blueprints and images. A lot of scientifically valid text is freely available on websites. For example universities, research institutions and government agencies publish scientific articles, academic theses and research papers on the Internet. Sources must be diversified.

Sources found in background literature are useful in information acquisition. It is also advisable to make good use of Internet search engines, online library catalogues, different databases and the expertise of library staff. Information acquisition also involves the use of foreign databases and

information sources. A modest number of literary sources can be compensated by the inclusion of articles, Internet sources and expert interviews. It is also useful to find out what literature is available on related subject areas, and whether knowledge in another subject area can be applied to the handling of your own subject.

Information retrieval is divided into different stages, which involve feelings, thoughts and action (figure 3.). After tolerating the uncertainty at the start the work becomes more purposeful and acquisition of relevant information changes into acquisition of essential information. After the development/research task has become clearer the gathering of material becomes more focused and your sense of expertise stronger. This means that your motivation in making the Bachelor's thesis also becomes stronger.

Stages	Task Initiation	Topic Selection	Prefocus Exploration	Focus Formulation	Information Collection	Search Closure	Starting Writing
Feelings	uncertainty	optimism	confusion, frustration, doubt	clarity	sense of direction/ confidence	relief	satisfaction or dissatisfaction
Thoughts		ambiguity	—————→		specify		
				—————→			
				Increase interest			
Actions		seeking relevant information	—————→		seeking pertinent information		

FIGURE 3. Initial Model of the Information Search Process (Kuhlthau 2004, 45)

*For further consideration!*

- *What do you already know about the subject? What kind of material and expertise does your Bachelor's thesis require?*
- *What are the core concepts in your thesis and how will you build the theoretical foundation?*

### 3.3 Source criticism and ethical principles

It is always necessary to ensure the reliability of your sources. One sign of reliability is that the text has been published by a well-known publisher. This means that the text has undergone a review process. In scientific journals articles are usually reviewed, but in newspapers and magazines the reader has to evaluate the reliability of the text by the author's reputation and expertise. Widely known and authoritative authors can be trusted. They are experts in their field, to whom other researchers refer. Another sign of reliability is the age of the source. Knowledge accumulates into the most recent research articles. In general original sources should be used, since information can change when it is cited. Secondary sources should thus be treated with reservation.

On the Internet, the threshold for publication is low. Generally reliable publishing organizations are institutes of higher education, research institutes and public sector organizations. The websites of organizations and businesses are often marketing-oriented.

Quoted text is separated from the author's own text by an in-text reference (see chapter 5.5 In-text references). Plagiarism of other people's text is not permitted. This applies to both summarizing text and direct quotations from all sources, including Internet sources. Oulu University of Applied Sciences has at its disposal software that reveals plagiarism. The meaning of a text must not change when it is summarized, which means in practice that the content of the text is understood. It is not allowed to make up or manipulate sources. If there are conflicting views on a subject in literature, they must be presented. After this a certain approach is chosen, the choice is explained and the Bachelor's thesis is founded on it.

Preparation of a Bachelor's thesis may require a research permit or the consent of research participants or their guardians to participation in the research. Among the ethical principles applied to research participants are for example safety, voluntary participation, confidentiality, reasonable risk/benefit ratio, avoidance of inequality and preservation of anonymity, if not otherwise agreed.

Further information:

Office of the Data Protection Ombudsman. Cited 12.11.2008, <http://www.tietosuoja.fi/index.htm>.



### 3.4 Schedule

An excellent tool for following the progress of the thesis is a sufficiently exact schedule, which can be mapped out using the stages of the thesis process. Since it is impossible to anticipate everything, the schedule should also allow for unexpected delays. The work should take no longer than the average time to gain 15 credits, that is 400 hours, which requires intensive and efficient work.

Guidelines for drawing up the schedule:

1. When do you want your thesis to be complete?
2. How much time do you have for
  - planning
  - familiarization with the subject, for example acquisition of literature and reading
  - gathering and processing of research material
  - manufacturing the product
  - writing
  - finalizing the thesis
  - other work?

Often the Bachelor's thesis is completed simultaneously with the degree. The process may feel slower at the end, which needs to be taken into consideration in time management. You'll need time for example for:

- the seminar: schedules agreed upon separately at the school in question, preparation of the supervising teacher and the peer reviewer for the seminar
- the maturity test: schedules agreed upon at the school in question
- assessment of the Bachelor's thesis: three weeks (Ammattikorkeakoulun hallitus 2012)
- applying for a degree certificate: all study attainments must be successfully completed (Ammattikorkeakoulun rehtori 2011)
- confirmation of the degree at the Degree College: schedules agreed upon at the school in question
- writing and presentation of the degree certificate: two weeks (ibid)

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*For further consideration!*

- *What is the schedule of your Bachelor's thesis?*
  - *How will you ensure that you will keep to the schedule?*
- 

### **3.5 Regulations and cooperation agreement**

Bachelor's theses are protected by copyright law on the same basis as other literary works. According to Copyright Act (Tekijänoikeuslaki 404/1961 1:1.1 §) the person who has created a work of literature or art has copyright to the work.

In the case of literary works the requirement level is quite low. A work of literature or art refers to a fictional or descriptive literary or oral presentation, a composition, a play or a film, an illustrated book, other work of visual art, an architectural work, a product of art handicraft or industrial art or other work. Whether a work fulfills the characteristics of an independent and original work is evaluated on a case-by-case basis. Copyright law cannot protect for example thoughts and topics, methods, principles, scientific discoveries and theories or research results and scientific knowledge.

Related rights refer to rights related to copyright and they protect for example public performances of a work, photographs or visual recordings. The protection provided by related rights is comparable with copyright.

Bachelor's theses may be protected by copyright and because of this at the beginning of the thesis process it is advisable to agree upon the rights of all parties and the protection of the rights. Copyright to a work may be the property of a student or a group of students. Copyright protection is established when a work has been created. Copyright is established automatically on the basis of copyright law and it does not require registration or other announcement. The term of copyright is 70 years from the author's death.

Copying Bachelor's theses without permission of the author of the original work is forbidden as is changing the work in a way that offends the author. The author can surrender the copyright fully or partially. The surrendering can be free-form, but a written agreement is recommended. The

Bachelor's thesis is normally made to order for a company or an organization. If the thesis is made to order, the parties must agree upon copyright among themselves.

If the Bachelor's thesis made in cooperation with a client a cooperation agreement is drawn up (appendix 1). Three copies are made (one to each party), as soon as the student, the supervising teacher and the client have reached an agreement on the aims, methods and schedule of the thesis. A written agreement is an expression of trust in the cooperation.

In Bachelor's theses other regulations concerning immaterial rights, as well as the regulations included in the Act on the Openness of Government Activities and the Personal Data Act must be taken into account. The Finnish Copyright Society, which operates under the Ministry of Education is responsible for copyright matters.

Further information:

Legislation on immaterial rights can be found for example in the Registered Designs Act (12.3.1971/221), the Utility Model Act (10.5.1991/800), the Trade Marks Act (10.1.1964/7) and the Act on the Exclusive Right in the Topography of an Integrated Circuit (11.1.1991/32). Up to date legislation is available for example on the Finlex Data Bank website: <http://www.finlex.fi>.

Other useful addresses are: Kopioisto Copyright Society: <http://www.kopioisto.fi/>,

Finnish Composers' Copyright Society Teosto: <http://www.teosto.fi/teosto>,

Copyright Information and Anti-piracy Centre: <http://www.antipiracy.fi/>.

## 4 IMPLEMENTATION

In the preparation of a Bachelor's thesis you need information literacy, that is critical thinking, problem-solving skills and the ability to acquire, use and communicate information. Information literacy is part of professional expertise irrespective of professional field. (Aho & Hollanti 2007, 164–165.)

Notes made on the progress of the thesis should be recorded for example in a thesis journal. You should record concise notes of all notable events in chronological order, which makes it easy to use them in the documentation of the thesis. Things to record are for example:

- discussions, meetings and matters agreed upon
- evaluations, speculations, ideas, choices, solution drafts, solutions and their justifications and decisions
- problems and difficulties that have arisen during the process
- time used for the work.

The notes help at the final stage of the thesis process for example when the student considers and describes his own professional growth during the preparation of the thesis.

The student is responsible for the implementation of the Bachelor's thesis, that is its progress and completion into a reported Bachelor's thesis. The student is expected to show own initiative in advancing the work and acquiring guidance. Oulu University of Applied Sciences will support the student in the implementation of the thesis in the form of Bachelor's thesis seminars and other forms of group and individual supervision. The Oulu University of Applied Sciences Library will support the student in the acquisition of information for the thesis. If the Bachelor's thesis has been ordered by a client, the student is given supervision not only by the university of applied sciences but also by the client.

### 4.1 Actors and tasks

In the Bachelor's thesis process different parties have different roles. Table 1 presents the actors in a Bachelor's thesis process and their tasks.

TABLE 1. Actors in a Bachelor's thesis process and their tasks

Student	University of applied sciences	Client
<ul style="list-style-type: none"> <li>- familiarizes himself with the Bachelor's thesis instructions</li> <li>- acquires a subject for the thesis and has it approved</li> <li>- makes an agreement on a cooperative Bachelor's thesis project together with the Oulu University of Applied Sciences and the client (appendix 1 Bachelor's thesis cooperation agreement) draws up a plan for the Bachelor's thesis</li> <li>- draws up a schedule for the preparation of the Bachelor's thesis, monitors it and modifies it if necessary</li> <li>- keeps in contact with the supervisors as agreed and discusses possible changes in the work with them</li> <li>- has the material intended for external distribution (for example questionnaire forms) approved by his supervising teacher</li> <li>- participates in seminar work</li> <li>- is responsible for the outcome of the work</li> <li>- documents the work according to the reporting instructions</li> <li>- assesses his Bachelor's thesis and his Bachelor's thesis process</li> <li>- requests feedback on the Bachelor's thesis from the client</li> <li>- submits the finalized Bachelor's thesis with all attachments to the teachers and saves the approved thesis into Theseus or the Oulu University of Applied Sciences Intranet</li> <li>- writes a maturity test</li> </ul>	<ul style="list-style-type: none"> <li>- is responsible for the practices related to Bachelor's theses</li> <li>- approves the subject of the Bachelor's thesis and the implementation plan</li> <li>- nominates the supervising teachers</li> <li>- signs the Bachelor's thesis cooperation agreement</li> <li>- arranges the Bachelor's thesis seminars</li> <li>- guides the learning process and ethical choices and gives help in problem situations at guidance discussions, supervisors' consultation hours and seminars</li> <li>- informs the student and the client how to act if the background material for the Bachelor's thesis contains confidential material</li> <li>- assesses the Bachelor's thesis and the maturity test</li> <li>- reviews the metadata of the thesis before it is saved into Theseus or the Oulu University of Applied Sciences Intranet</li> </ul>	<ul style="list-style-type: none"> <li>- participates in the definition of the objectives of the work together with the student and the supervising teacher</li> <li>- signs the Bachelor's thesis cooperation agreement</li> <li>- promotes the advancement of the Bachelor's thesis process by providing the student with required information and material and supervises the process from the client organization's perspective</li> <li>- provides written feedback on the Bachelor's thesis</li> </ul>

*For further consideration!*

- *Am I familiar with the tasks my thesis involves or is it necessary to clarify them with my supervising teacher?*

## 4.2 Seminars

The seminar is where the author of the thesis presents his work and receives feedback on it. There may be several seminars during different stages of the process, for example an idea seminar, a planning seminar and a publishing seminar (Oulun seudun ammattikorkeakoulu 2006, 40). The seminar is a learning situation based on interaction which can be arranged by the university of applied sciences, the client or the professional field. A student who has been nominated as a peer reviewer may be present at the seminar. The peer reviewer assesses first and foremost the content of the work, but also its presentation. The aim of the peer review is to develop both critical thinking and the ability to give and receive feedback.

Tips to presenters of finalized Bachelor's theses:

- Submit your thesis in good time to the peer reviewer, the supervising teacher and for joint reading according to agreement.
- Put yourself in the participants' position when preparing the presentation.
- Practice.
- Check beforehand that the equipment you need for illustrative purposes functions.
- Present the main points of your work briefly and clearly.
- Read aloud only short samples of your work.
- You may present new information and correct mistakes.
- Remember appropriate use of language and way of speaking. Be also polite.
- Remember interaction, eye contact, the listeners and overall communication.
- Don't make apologies or excuses. Be proud of yourself and what you've accomplished.

Tips to peer reviewers of finalized Bachelor's theses:

- Familiarize yourself thoroughly with the thesis.
- In the content of the thesis pay attention to:
  - Choice and mastery of the method of implementation
  - Pertinence of selected information
  - Quality and diversity of sources and quotations
  - Manner of representation
    - structure (logicalness, correlation of headings and content, sufficient examination of core issues)
    - language (definition of concepts, correctness)

- style (consistency, exactness, neutrality)
  - thoroughness of the work, novelty value
  - correlation of aims and result.
- In the presentation pay attention to:
  - interaction (eye contact, atmosphere, paying attention to listeners)
  - clarity of expression (voice, way of speaking, language)
  - cogency (expertise, vocabulary, non-verbal communication)
  - illustrativeness.
- Assess the work and its presentation critically, matter-of-factly and constructively.
- Bring out the good points in the work as well as its shortcomings and development proposals.
- Begin by presenting the strengths of the work to create a favourable atmosphere.
- Tell the correct or better alternative if you point out errors.
- Present criticism in the form of a question (for example "Have I understood correctly...?")
- Listen to how the presenter answers and make sure that you are talking about the same thing.
- Finish by assessing the work positively.

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*For further consideration!*

- *What should I do in a seminar in order to support my studying in the best possible way?*
  - *How do I make my seminar presentation convincing and informative?*
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## 5 REPORTING

The scope of the report of the Bachelor's thesis may vary. The structure of the report and the order of presentation may also vary according to the development/research task and the methods used for it. The degree programme in question will give instructions on the reporting, in case they differ from these instructions.

If authors of thesis come from different universities of applied sciences, they choose according to whose student's instructions of university of applied sciences they report their thesis. The names of universities of applied sciences of authors are mentioned in the report.

Giving a title to the thesis is important, since it gives the reader a first impression of the content of the report. The title must be short, concise and informative. A subtitle may be used if necessary.

The headings used in the thesis must be short and informative. They should not normally be in the form of a sentence. Avoid headings in the form of a question as well.

### 5.1 Language

In the degree programmes conducted in Finnish Bachelor's theses are written in Finnish and in the degree programmes conducted in English Bachelor's theses are written in English. If the student has reasons to deviate from this rule, he must apply to change the language of his Bachelor's thesis. The decisions on language-change applications are made by the school.

The Bachelor's thesis serves an important purpose as a bridge between the institute of higher education and working life. The university of applied sciences and working life may have different expectations of the text. It is the task of the student to display his expertise in a credible and clear manner in the thesis to both the institution of higher education and his own profession. (Vuorijärvi & Boedeker 2007, 173–174.) Although the readership of the thesis is diverse, to facilitate writing it is helpful to think of the target group as people who master the basics of the field but who are not experts in it, however.



It is often recommended that Bachelor's theses should be written in the passive voice in order to keep the focus of the text on the subject matter and not on the author (for example In the survey it was...). It is possible to use first person in the thesis if it is natural in the context. (for example As the work progressed I noticed...). Such sections in the thesis may be for example the introduction and the discussion or project-oriented and action-oriented theses in general. In the choice of tense you should ensure that the language is natural and consistent. General principles and propositions should be presented in present tense (for example Usability means that...), but specific results and the progress of the research in past tense (for example The starting point for the project was...). (Jääskeläinen & Paukkeri 2005, 17.) The choice of expression should be consistent throughout the Bachelor's thesis report (Hirsjärvi, Remes & Sajavaara 2009, 293–294).

The thesis must be written in formal style. The text should express the subject matter as unambiguously and engagingly as possible. The language used in the thesis is important, as even a well-made thesis will lose some of its credibility if the text is sloppy and rife with linguistic errors. In a Bachelor's thesis the student must aim at expert communication, in which theoretical, linguistic and communicational expertise are combined (Vuorijärvi & Boedeker 2007, 174).

A well-written formal text may be based for example on the following principles:

- Divide the text into logical chapters. Divide the chapters into a two or three level hierarchy if necessary.
- Divide the text into paragraphs. Make sure that even each subchapter consists of at least two text paragraphs. Check that each paragraph includes a whole thematic entity and both a topic sentence and a support sentence.
- Avoid overly long sentences. Remember to use both principal clauses and subordinate clauses. Vary the length of sentences and clauses. Avoid complex clause and sentence structures. Use participial phrases with care and unambiguously.
- Pay attention to the choice of words. Aim at exact and unambiguous expression, avoid unnecessary foreign words and discard clichés as well as vague expressions and figures of speech.
- Use punctuation in accordance with the norms of standard language usage. Keep in mind the norms and recommendations for correct language usage. Go through spelling rules and utilize guidebooks on the correct use of language if necessary. (Vilkka & Airaksinen 2003, 151.)

## 5.2 Parts of the report

The report consists of the following parts

- cover
- title page
- abstract
- contents
- introduction
- description of the development/research task (theoretical foundation, empirical results and research process)
- results
- conclusions
- discussion
- sources
- appendices

It is possible to present the results of the Bachelor's thesis in connection with the development/research task and the conclusions in connection with the results (Vuorijärvi & Boedeker 2007, 179–180; Hirsjärvi et al. 2009, 263). The last parts of the report are essential from the viewpoint of the practical application of the results (Vuorijärvi & Boedeker 2007, 181). Different educational fields have different practices regarding the extent of discussion included in the report.

### Cover

The name of the author and the title of the Bachelor's thesis should appear on the cover of the report (appendix 2). If there is more than one author, the names should be in alphabetical order. The last name is separated from the others with the '&' sign. The name of the author appears in font size 12. The title appears in bold uppercase letters in font size 14. A possible subtitle appears in lowercase letters under the main title in font size 12. Use of abbreviations is not allowed.

### Title page

The title page of the Bachelor's thesis (appendix 3) must follow the style of the cover. The following information should appear in the bottom right corner of the title page using line spacing 1: au-

thor's name, Bachelor's thesis, term of completion, name of degree programme and the name Oulu University of Applied Sciences. The text is justified on the left. The title of the thesis appears in bold uppercase letters in font size 14 and a possible subtitle appears in lowercase letters under the main title in font size 12. All other text is in font size 12.

### **Abstract**

The abstract (appendix 4) tells the essence of the content, aim, method of execution and conclusions of the Bachelor's thesis. It gives a short description of the thesis. The text of the abstract must be based on the concepts used in the thesis. Unestablished abbreviations or terms, tables, figures or references must not be used in the abstract. The abstract must consist of full sentences in the same language as the report. The maximum length of the text is one page, using line spacing 1. Keywords describing the content of the thesis must be included at the end of the abstract.

Bachelor's theses written in English can also include a Finnish abstract (appendix 5). Its contents may differ in part from the English abstract. The student is responsible for the linguistic correctness of the foreign-language abstract.

### **Contents**

The table of contents, which should be entitled CONTENTS, shows the disposition of the report and how the issues discussed in it are related to one another. All headings and subheadings of chapters are named and numbered in the table of contents in the same form as they appear in the text. The table of contents shows the starting page of each chapter. In addition to headings the table of contents must also include the starting pages of the list of sources and appendices (cf. Hirsjärvi et al. 2009, 254.)

### **Introduction**

The introduction introduces the subject of the Bachelor's thesis to the reader. It has two main functions: to arouse the reader's interest and to provide the reader with preliminary information about the matter at hand. A good beginning lends credibility to the rest of the text. (Hirsjärvi et al. 2009, 254–255.) The introduction briefly describes the background of the choice of subject and the viewpoint, purpose and function of the thesis and the methods used. It introduces the core concepts and briefly the frame of reference or theoretical foundation of the thesis. The author of

the thesis may establish the topicality and importance of the project, the benefits of the work to the client or to the professional field and its significance to his own professional development.

### **Description of development/research task (theoretical foundation, empirical results and process)**

In this section the student describes the theoretical foundation he has used in the Bachelor's thesis (see also 3.2 Acquisition of information) and its application to practice. It is important that a connection is established between these aspects. If the theoretical foundation and its application to practice by the student remain disconnected, the Bachelor's thesis cannot reach its objective: "to develop and demonstrate a student's ability to apply his knowledge and skills in a practical expert task related to his professional studies" (Ammattikorkeakoulun vararehtori 2014). In the Bachelor's thesis the research material and methods must be described so accurately that an expert in the field can assess their reliability and repeat the task. The development/research task is the most important and most extensive part of the report, because the results and conclusions are built on it. Its title must reflect the content and nature of the thesis.

### **Results and conclusions**

The publication of the results and outcomes of Bachelor's theses varies depending on the development/research task undertaken. The results may also be organized in different ways. One recommended method is to present the main results so that they answer the questions asked in the definition of the development/research task. The conclusions are drawn from the results obtained in the Bachelor's thesis and they are considered in relation to the starting point of the development/research task. In the conclusions the used theoretical foundation is reflected against the empirical results. The conclusions show how the Bachelor's thesis has changed or increased knowledge in the development area and how the results can be utilized in practice. It is advisable to pay special attention to the way the results and conclusions are presented, since it is the part of the thesis that is of most interest to the client.

### **Discussion**

In the discussion the author analyses the subject of the Bachelor's thesis and its execution, as well as ethical questions. The results of the thesis are compared with the questions presented in the determination of the research task and new questions that have arisen during the writing process are analyzed. In the discussion the author presents his own comments and views on the development/research task.

The following outline may be helpful in the writing of the discussion section of the thesis:

1. Reiterate the objective that has been set, the selected method and the main results.
2. Assess your work and your methods. Use criteria that are specific to the task at hand and the implementation method, such as criteria assessing the success of the project (for example result, time, cost, interest group satisfaction, learning, work satisfaction) or the reliability of the research.
3. Give the client well-founded practical instructions.
4. Present well-founded ideas for further development and bring forward what you have learned during the preparation of the thesis to help other students. (Oulun seudun ammattikorkeakoulu 2006, 24.)

In some cases the discussion may be compensated by a separate description according to the guidelines provided for the degree programme.

### **List of references**

The sources used in the report are listed in the list of references at the end of the report. The list must include all sources referred to in the report. The list should not contain publications that the author has possibly read but which are not referred to in the text. For more detailed instructions on references see chapter 5.6.

### **Appendices**

Material that it is not necessary to place in the text itself to further the reader's understanding of the issues discussed but that is, nevertheless, referred to in the text may be included as an appendix. Appendices are evidential and additional material. Such material includes items used for acquisition of information, for example questionnaire forms. Appendices follow the list of references. The title of the appendix in bold uppercase letters, the word APPENDIX in uppercase letters not bolded and the number of the appendix must be written on the appendix itself. The point size of the text is 12. If the title of the appendix is long and it is divided into two lines, however, the word APPENDIX and the number should appear on the first line. If the appendix has not been written by the author, its origin must be indicated as a reference. If there are a large number of appendices, a uniform table listing all the appendices included in the report may be included at the beginning of the appendices section on a separate page.

## 5.3 Report appearance

### Page size, margins, line spacing and page numbering

- page size: A4
- left and right margins: 3 cm
- top and bottom margins: 2,5 cm
- distance between page number and bottom of page: 1,5 cm

Well-reasoned deviations from to the above-mentioned page size and margins are acceptable. Line spacing must be 1,5 lines, and it must remain consistent throughout the report. In the abstract, at the bottom right corner of the title page and in a long direct quotation (see chapter 5.5.1 Indirect and direct quotation) the line spacing must be 1. Both edges must be justified.

Page numbers are centred at the bottom of the page. Page numbering starts from the cover, but the numbers only appear on the page starting from the abstract page, which is on page three. Page numbering continues to the list of references and appendices, which are included in the table of contents. If an appendix has multiple pages, the appendix marking (for example APPENDIX 8) should only appear on the first page.

### Division into paragraphs

A paragraph is always longer than just one sentence. Each paragraph consists of one information unit, and it is a good idea to vary the length of paragraphs. All lines start at the same point on the left margin without indentation, and one blank line is left between paragraphs.

### Typefaces and text effects

Font sizes and character profiles must be clear and easy to read. The Oulu University of Applied Sciences uses the Arial Narrow typeface on the covers of Bachelor's theses reports and its use is recommended for the actual text as well. In these instructions the Arial Narrow typeface is used. For example Arial or Times New Roman are also typefaces that are easy to read and commonly used and their use is recommended. The same typeface should be used throughout the Bachelor's thesis. The recommended point size for body text is 12.

You can also emphasize individual words by making them **bold** or *italic*. Underlining is not recommended. It is advisable to exercise moderation in the use of text effects. The text of the

report should be as straightforward as possible, using full sentences; for example, you should not use lists unless absolutely necessary.

## **Headings**

All headings start from the left margin at the same point where the text starts. Hierarchical numbering is used for headings. The number and the text of the heading are separated by a single character space. The last figure in the number is not followed by a full stop. If a heading is more than one line long, the second line is aligned with the first letter of the first line rather than the heading number on the first line.

In text, the size of main headings is 14 points and the point size of subheadings is 12. All headings are in bold. If necessary, you may also use unnumbered subheadings, but they are not included in the list of contents, and their point size is the same as that used for body text.

There must be at least two subheadings on each heading level: if there is a subheading 2.1, there must also be a subheading 2.2. Three heading levels are usually enough. Decimal numbering is marked as follows:

## Text

## CONTENTS

### 2 HEADING (14 p.)

### 2 HEADING (12 p.)

#### 2.1 Subheading (12 p.)

##### 2.2.1 Subheading (12 p.)

##### 2.2.2 Subheading (12 p.)

#### 2.2 Subheading (12 p.)

### 2.1 Subheading (12 p.)

#### 2.1.1 Subheading (12 p.)

## REFERENCES (12 p.)

## APPENDICES (12 p.)

#### 2.1.2 Subheading (12 p.)

### 2.2 Subheading (12 p.)

## REFERENCES (14 p.)

Each chapter starts on its own new page. The heading and the following text or subheading are separated by three line breaks (that is two blank lines). Subheadings within a chapter are separated from the sections above and below by two line breaks (that is one blank line).

## 5.4 Visual illustration

The comprehensibility and readability of text can be improved by using, tables, figures and diagrams. They should be used to illustrate only the essential content or conclusions of the thesis. If there are a large number of tables and figures, it is advisable to include some of them as appendices.

Tables, figures and diagrams must be numbered and entitled (see table 2, figure 4 and example1). It is possible to assign diagrams only a number without a title (see example 2). The words *TABLE*, *FIGURE* and *DIAGRAM* are capitalized and italicized. Also the names of the tables, figures and diagrams as well as possible citations are italicized. Tables, figures and diagrams begin at the same point on the left margin as the body text. It is recommended that the same typeface and font size are used for them as for body text.



You should not place a table or a figure immediately after a heading. Instead, you should start with an introduction to the table or the figure. You should always refer to a figure, table or diagram in the actual text.

## **Tables**

Tables must be as explicit and self-explanatory as possible, so that it is possible to understand them after reading a description of the material and methods. The title of a table must indicate its content.

Place the title above the table. The name should be no longer than the width of the table and it can be continued on the next line if necessary. It is recommended that you leave two blank lines before the title and one blank line after the title. If necessary, you may place footnotes under the horizontal line at the foot of the table. Each row and column must have a name or a heading.

If a table includes percentages the table must indicate what figure has been used to calculate the percentages. If any variable has a great deal of missing data (for example a large number of respondents have not answered a question), you may provide information on the extent of missing data either in the text, in a footnote to the table or in the table itself. If a statistical test has been carried out, it must be mentioned in a footnote.

Tables that have been previously published elsewhere can also be used in the report. In this event you must mention the source either at the end of the heading or in a footnote at the end of the table.

TABLE 2. Degree completion by field of study by the end of year 2007 (Oulun seudun ammattikorkeakoulu, cited 12.11.2008)

Field of study	Number of degrees	%
Culture	422	5
Natural sciences	473	6
Natural resources and the environment	333	4
Social care, health care and sports	2566	31
Technology and transportation	3059	37
Social science, business economics and administration	1350	17
Total	8203	100

## Figures

Figures are more suitable than tables or text for presenting qualitative aspects of numerical data, such as comparisons and relations between numbers. All illustrations that are not tables are designated as figures. Such are for example bar and sector graphs, as well as photographs, maps and drawings. (Hirsjärvi et al. 2009, 328–329.) The title of the figure is placed below the figure. In some degree programmes the word “image” may be used instead of the word “figure”.

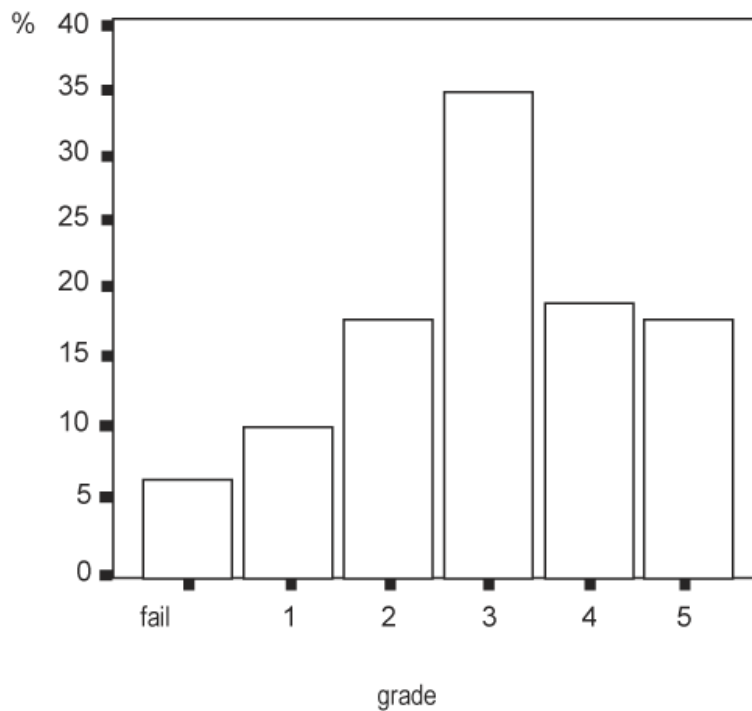


FIGURE 4. Breakdown of mathematics grades ( $n = 49$ )

A screenshot, for example, of a piece of software is numbered and entitled similarly as other figures (see figure 5).

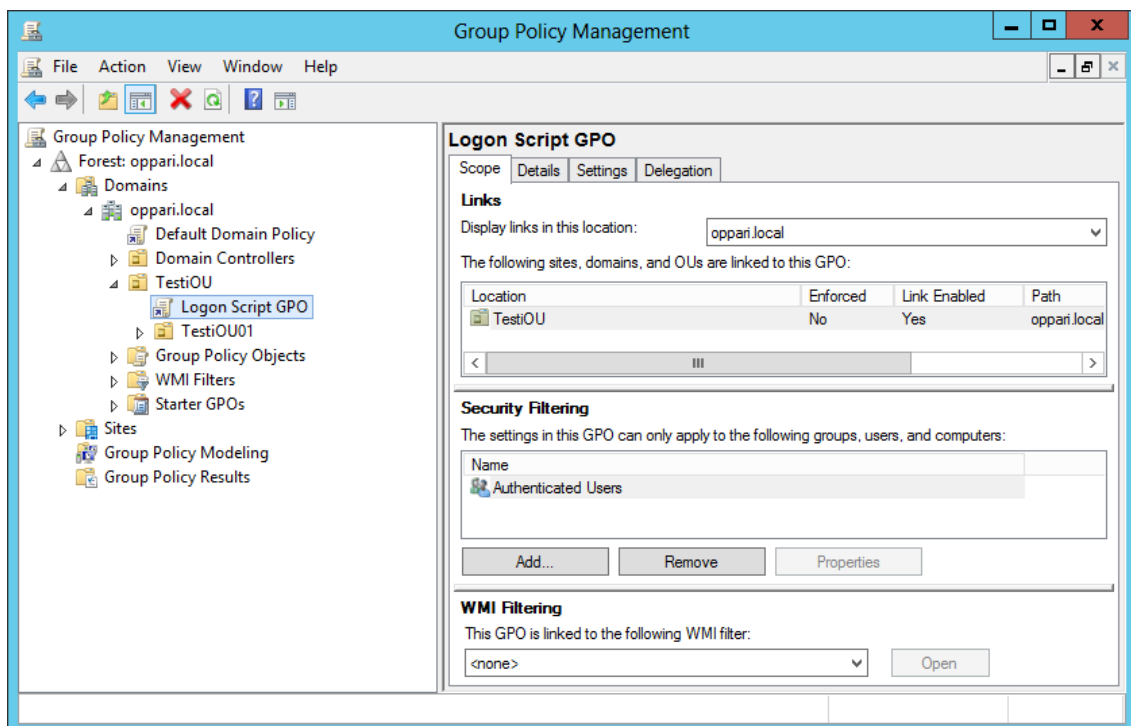


FIGURE 5. Group Policy Management console (Microsoft 2013, cited 15.10.2013)

## Formulas

If a formula is numbered and entitled, the title is placed above the formula. If a formula is only numbered, the number is in the right margin of the text. All formulas are italicized.

### Example 1

*FORMULA 1. Formula for calculating the total utilization rate of a LF/VD line.*

$$\text{Total utilization rate (\%)} = \frac{\text{Total processing time (h)}}{\text{Report hours (h)}} \times 100\%, \text{ where}$$

$$\text{Total processing time} = \text{Report hours (24h)} - G(h) - H(h) - I(h), \text{ where}$$

$G$  = No LF / VD –meltings (h)

$H$  = Processing time overrun (h)

$I$  = Processing time of LFfeedback (h)

### Example 2

Bending strength is calculated from the formula (1)

$$M_u = \mu b d f_{cd} \quad (1),$$

where

$\mu$  is relative torque,

$b$  compression zone width,

$d$  effective height and

$f_{cd}$  compression strength of concrete

## 5.5 In-text references

In the text sources are indicated as in-text references. The purpose of in-text references is to inform the reader whose text or thoughts are referred to and to provide the reader with an opportunity to verify the authenticity of the references and sources. The Copyright Act states that sources must be acknowledged. All in-text references must be found in the list of references. In-text references help the reader to find in the list of references the book, article or other source to which the author refers.

In-text reference: A research report differs from many other forms of writing (a newspaper article, for example) in that it should make clear what material and ideas have been originated by the student and what is owed to the work of others (Sharp & Howard 1996, 188).

Corresponding entry in the list of references: Sharp, J. & Howard, K. 1996. The Management of a student research project. 2<sup>nd</sup> edition. Aldershot: Gower.

In-text references are enclosed in parentheses and placed either at the beginning or at the end of the quoted text. The position of the full stop is significant in in-text references. The position of the full stop is determined by the length of the reference, i.e. whether it refers only to one or more previous sentences.

**If the referenced thought is expressed in one sentence**, the full stop is placed outside the brackets. The referenced sentence does not have its own full stop. The reference is included in the sentence.

#### Example 3

The essential concepts related to the study should be defined and there can even be a separate chapter for the concepts and terminology (Kananen 2011, 141-142).

If the text mentions the author (an author-specific reference model), it can be excluded from the reference.

#### Example 4

According to Blaxter, Hughes and Tight (2001, 122) a good literature review is more than just a list of sources of existing publications in the field of study.

**If the reference thought expands over several previous sentences**, the full stop is placed within the brackets. Each referenced sentence has its own full stop. The reference forms an independent sentence.

#### Example 5

You should draw up a timetable for the thesis and each of its parts. The timetable should be made realistically so that you can follow it. Making a timetable for a big development project is

difficult, but if you divide it into suitable sub-processes then the job is a lot easier and it is easier to make an approximate estimate of the working time required for each sub-process. (Hakala 2000, 53.)

If the text mentions the author, the reference is placed at the end of the referenced quotation, and the author is excluded from the reference.

#### Example 6

Rudestam and Newton use a wheel metaphor to describe the research process. They suggest that research is not linear but a recursive cycle of steps that are repeated over time. (2007, 5.)

### 5.5.1 Indirect and direct quotation

Quoted information can be either indirect or direct, verbatim. An indirect quotation is a rephrasing or a summary of the original text. Use of summarized or rephrased text facilitates maintaining a uniform style throughout the Bachelor's thesis. Examples 7–8 are indirect quotations.

#### Example 7

A good literature review is more than just a list of sources of existing publications in the field of study (Blaxter, Hughes & Tight 2001, 122).

#### Example 8

A good literature review is more than just a list of sources. It should offer an analytical study of a given field. It should also locate the research project, to provide it with a background and a context. (Blaxter, Hughes & Tight 2001, 122.)

A direct quotation follows the original text verbatim. Short direct quotations may be used for example when 1) you want to give the reader a sample of the style used in the source, 2) the source material is so important or controversial that it must be kept intact, 3) you want to ensure that the information doesn't change, 4) the wording used in the source must be kept absolutely unchanged (Hirsjärvi et al. 2009, 120).

Short direct quotations (that is not longer than three lines) are always placed inside quotation marks (see example 9). Direct quotations that are longer than three lines (see example 10) are

separated from the surrounding text by inserting a blank line both before and after the quotation. Indent long quotations and use line spacing 1. In such a case it is not necessary to use quotation marks (cf. Hirsjärvi et al. 2009, 358.)

#### Example 9

"You should use references to justify and support your arguments" (Blaxter, Hughes & Tight 2001, 127).

#### Example 10

Obviously, quotations should be properly differentiated from the main body of the research report. Indented, single-spaced text is perhaps the easiest way of clearly differentiating the longer passage, though quotation marks are generally adequate for a single sentence. Variations, such as a different typeface (for example, italic), may also be helpful. In either case, the work from which the quotation is drawn should be clearly referenced as discussed below. (Sharp & Howard 1996, 189.)

You may abbreviate text even in a direct quotation by leaving out insignificant words or sentences. The original thought must not change, however. Insert two hyphens in the place of removed words.

#### Example 11

"- - a skillful researcher draws on original source material rather than - - review articles and secondary sources" (Rudestam & Newton 2007, 64).

### 5.5.2 Examples of in-text references

#### Basic model

Enclose the author's last name, year of publication and page number(s) in parentheses.

#### Example 12

...(Murray 2002, 17).

If there are two authors, both their names are always mentioned. If there are more than two authors, they are all mentioned when the first reference is made (see example 13). After this it is sufficient to mention only the first author's name followed by "et al." (see example 14).

#### Example 13

...(Blaxter, Hughes & Tight 2001, 28).

#### Example 14

...(Blaxter et al. 2001, 28).

If the author is not mentioned, the title (of an article, newspaper story or other) is used instead. If a quotation extends over more than one page, it is marked as in example 15. The dash used between page numbers is available in Word by pressing the Ctrl and – (minus) keys simultaneously. A non-continuous quotation that consists of pieces of text taken from several pages is marked as in example 16.

#### Example 15

...(Rudestam & Newton 2007, 62 – 63).

#### Example 16

...(Rudestam & Newton 2007, 62, 64, 67).

### **Laws and decrees**

In-text references to laws and decrees should include title, number, year, chapter, section and paragraph. The chapter may be left out, if the sections are not numbered separately under each chapter. The paragraph is included if a section contains more than one paragraph. The chapter and section are separated by a colon and the section and paragraph by a full stop. There should be a character space before section symbols.

#### Example 17

Union citizens who have resided legally for a continuous period of five years in the host Member State shall have the right of permanent residence there (Directive 2004/38/EC of the European Parliament and of the Council 38/2004 4:16.1 §).

### **Digital sources**

The same logic is used for digital sources as with other in-text references. The digital sources contain the phrase “cited” and the date when the thesis writer has familiarized themselves with the source.



In-text references to web pages should include the author of the page, its year of publication, the phrase “cited” and the date.

#### Example 18

...(Miller 2011, cited 21.11.2011).

If web pages do not have a creator, the organization responsible for the administration of the pages is listed as the author. If this piece of information is not available, the title of the text is listed first. The first piece of information of an in-text reference is also placed first on the references. If the digital source does not have a year, the year when the pages were updated is used. If this piece of information is not available, the year of the reference is used.

#### Example 19

...(City of Oulu 2006, cited 23.1.2006).

#### Example 20

... (Ministry of Employment and the Economy 2013, cited 27.6.2013).

In-text references to electronic books or journals follow the same practice as references to corresponding print publications.

#### Example 21

...(Bornmann 2008, 45).

If an electronic book does not have page number, the number of the chapter is marked in the in-text reference. If the chapters are not numbered, the title of the chapter is used. If the chapter is extensive, the in-text reference is specified with the title of the sub-chapter.

#### Example 22

... (Beane 2012, chapter 5, Polygons).

In-text references to e-mail attachments should include the sender's name, the text “e-mail message” and sending date.

#### Example 23

For web sources the date of reference must also be mentioned (Korhonen, e-mail message 9.1.2007).

#### **Interview, discussion and lecture**

In-text references to interviews, discussions and lectures should include the last name of the interviewee/person who held the lecture, the word “interview”, “discussion” or “lecture” and time.

#### Example 24

Students often consult a librarian about their in-text references... (Kivimäki, discussion 5.10.2009).

#### **Multiple simultaneous sources**

When simultaneously referring to multiple sources on the same content, separate the sources by a semi-colon. The sources are presented in chronological order and sources published in the same year in alphabetical order by author name.

#### Example 25

If you use someone else's ideas you should credit them by referencing their work. Using someone else's writings without due attribution constitutes plagiarism. (Swales & Feak 1994, 125; Sharp & Howard 1996, 189; Murray 2002, 114.)

#### **Multiple publications by same author**

In cases where an author has published many texts in the same year, they are distinguished by the letters a, b, c etcetera. Similar marking is used when referring to different pages on the same website.

#### Example 26

Writing in a second language... (Murray 2002a, 17).

#### **Secondary sources**

Referring to secondary sources is not recommended. If it is not possible to use a primary source, the reference relation is marked as in example 27. In this example the list of references should include the publication by Murray, that is the book that the student himself has read.

#### Example 27

Murray (2002, 101) refers to Leedy...

### Appendices

When referring to appendices in body text use appendix numbers. References are denoted in sentences by a lowercase initial letter (appendix 1) and outside sentences by an uppercase initial letter (Appendix 1).

### **Ibid., see and cf.**

If the same reference is repeated in full two or more times in succession within a chapter, it may be replaced by "(ibid.)". If the author and year of publication are the same but the page numbers differ, use "(ibid., 23)". Never use "(ibid.)" in the first reference on a page.

If you want to lend support to presented results and conclusions, you can refer to publications on the same subject which either provide similar information on the matter or justify the conclusions that have been reached.

#### Example 28

... (see Fowler 1993, 94; Dillman 2000, 32; Iarossi 2006, 29).

If you are referring to views that differ from your own conclusions you can use "cf." Similarly if sources are interpreted in such a way that the original idea may change, it should also be noted.

#### Example 29

...(cf. Iarossi 2006, 30–31).

## 5.6 References

The title of the list of references should be "References". References are listed in alphabetical order by author's last name. If the publication has no author, the name is replaced by the title of the work and the reference is placed in the list of references alphabetically under the title.

You can manage in-text references and references with the Web-based RefWorks bibliographic management tool. Use of RefWorks is free of charge to students and it is available on the elec-

tronic resources page on the Oulu University of Applied Sciences Library website and also through the National Electronic Library Interface NELLI. The referencing practices found in these instructions are available under Bibliography, Output Style under the title Oulu University of Applied Sciences – Bachelor's thesis.

The list of references must contain the bibliographical information that is necessary for locating publications. This information includes:

- Author(s), editor(s)
- Year of publication
- Title
- Translator(s)
- Edition used (if there are more than one)
- Place of publication (registered office of the publisher)
- Publisher or conference organizer
- Editor of the whole publication
- Title of the whole publication
- Pages on which the article appears in an edited publication or a periodical
- Series title and number in the series
- Journal title
- Volume number
- Journal issue (often appears after the volume)
- Name, location and time of conference (Hirsjärvi et al. 2009, 367–366).

For electronic sources include

- author or person responsible for content of document
- year of publication
- title (for serial publications include article title, serial title, volume and issue.)
- reference and its date
- Internet address (http, https or ftp) (cf. Hirsjärvi et al. 2009, 386).

## **Books**

If a book has one author, include his last name, initial letter of first name, year, title, place of publication and publisher.

### **Example 30**

Grönroos, C. 2007. In search of a new logic for marketing: foundations of contemporary theory. Hoboken, NJ: John Wiley & Sons.

### **Example 31**

Webster, F. 1995. Theories of the information society. London: Routledge.

If a book has more than one author, include all their names. Insert "&" before the last author's name.

### **Example 32**

Kotler, P., Keller, K. L. & Lu, T. 2009. Marketing management in China. Singapore: Prentice Hall.

For books remember to include also the edition and for translated works the translator. The year of publication of the original publication should be included if it has special significance (for example classics).

### **Example 33**

Huck, S. W. 2008. Reading statistics and research. 5th edition. Boston: Pearson Education.

### **Example 34**

Hansen, W-R. & Gillert, F. 2008. RFID for the optimization of business processes. Translated by K. Cox. Chichester: John Wiley & Sons.

### **Example 35**

Drucker, P. F. 2007. Management: tasks, responsibilities, practices. New Brunswick, NJ: Transaction Publishers. Originally published 1974.

An edited work consists of many articles by different authors. In such cases include the last name of the author of the article, initial letter of first name, year, article title, initial letter of the first name

and the last name of the editor of the publication, title of the publication, place of publication, publisher and the page number(s) on which the article appears in the publication.

#### Example 36

Marginson, P. 2009. Performance pay and collective bargaining: a complex relationship. Published in S. Corby, S. Palmer & E. Lindop (ed.) Rethinking reward. New York: Palgrave Macmillan, 102–119.

### **Journals**

For journal articles include the last name of the author of the article, initial letter of first name, year, article title, journal title, volume, issue and page number(s) on which the article appears in the publication.

#### Example 37

Marchionini, G. 2008. Human-information interaction research and development. Library & information science research 30 (3), 165–174.

#### Example 38

Kaplan, R. S. & Norton, D. P. 1996. Using the balanced scorecard as a strategic management system. Harvard Business Review 74 (1), 75-85.

#### Example 39

Martínez, J. G. 2008. Actualizing the past: political devolution and the symbols of the European regions. The case of Belgian federalization (1970–1998). Rethinking History 12 (2), 229–252.

### **Serial publications, reports and committee reports**

For reports include the last name of the author, initial letter of first name, year, title of the publication and publication channel. A report may also have been written by a communal author. For committee reports include title, year, number and place of publication.

#### Example 40

Squicciarini, M. & Loikkanen, T. 2008. Going global: challenges for knowledge-based economies. Publications of the Ministry of Employment and the Economy 2008:20.

#### Example 41

Finnish public library policy 2015: national strategic areas of focus. 2009. Publications of the Ministry of Education 2009:31.

#### Example 42

Report by the Somera Committee 2002. Committee report 2002:4. Helsinki: Ministry of Social Affairs and Health.

### **Laws and statutes**

For laws and statutes include name, date and number in the Statute Book of Finland.

#### Example 43

Aliens Act 30.4.2004/301.

### **Digital sources**

For electronic books and journals, web pages and individual documents available on the Internet include the author's last name, initial letter of first name, year, title of source, the phrase "cited", date and Internet address.

#### Example 44

Doupi, P. 2009. National reporting system for patient safety incidents. A review of the situation in Europe. National Institute for Health and Welfare. Report 13/2009. Cited 26.6.2013, <http://urn.fi/URN:NBN:fi-fe201205085214>.

#### Example 45

Rainer, Y. 2014. The aching body in dance. A Journal of Performance and Art. Cited 26.3.2014, [http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/performing\\_arts\\_journal/v036/36.1.rainer.html](http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/performing_arts_journal/v036/36.1.rainer.html).

#### Example 46

Gruen, A. 2008. Thesis writing. Cited 9.10.2009, [http://www.aars-acrs.org/acrs/WhiteElephants/2008/ThesisWriting\\_Armin\\_Gruen.pdf](http://www.aars-acrs.org/acrs/WhiteElephants/2008/ThesisWriting_Armin_Gruen.pdf).

#### Example 47

Harper, G. 2011. Viability of artificial neural networks in mobile healthcare. Oulu University of Applied Sciences. Degree Programme in Business Information Technology. Bachelor's thesis. Cited 26.6.2013, <http://urn.fi/URN:NBN:fi:amk-201105117283>.

#### Example 48

Terra Silva, F. 2013. Obstacles to moral education in a private school: a qualitative case study in Brazil. University of Oulu. Faculty of Education. Master's thesis. Cited 11.4.2014, <http://herkules.oulu.fi/thesis/nbnfioulu-201401171036.pdf>.

If web pages do not have a creator, the organization responsible for the administration of the pages is listed as the author. If this piece of information is not available, the title of the text is listed first. If the digital source does not have a year, the year when the pages were updated is used. If this piece of information is not available, the year of the reference is used.

#### Example 49

Helsinki Times 2014. Finland the third most expensive EU country. Cited 11.4.2014, <http://www.helsinkitimes.fi/finland/finland-news/domestic/8866-finland-the-third-most-expensive-eu-country.html>.

#### Example 50

City of Oulu 2009. Schools and education. Cited 7.10.2009, <http://www.ouka.fi/english/school/index.htm>.

#### Example 51

Finnish National Board of Education 2014. Regulated professions in Finland. Cited 11.4.2014, [http://www.oph.fi/english/services/recognition/regulated\\_professions](http://www.oph.fi/english/services/recognition/regulated_professions).

#### Example 52

Report from the Working Group on Text-Matching Software for Detecting Plagiarism in Student Work 2013. Cited 18.12.2013, <http://www.tie.ualberta.ca/~media/tie/Documents/TextMatchingSoftwareReport.pdf>.



A source that requires signing in (for example information on an organization's intranet) is indicated by the phrase "Internal source".

#### Example 53

Oulu University of Applied Sciences 2014. Graduates of Oulu UAS. Internal source. Cited 22.4.2014, [https://oiva.oamk.fi/tietoa\\_opiskelusta/valmistuminen/valmistuneet/](https://oiva.oamk.fi/tietoa_opiskelusta/valmistuminen/valmistuneet/).

For e-mail messages include the sender's last name, initial letter of first name, year, heading of the message, title/rank/position, organization, the phrase "e-mail message" and time.

#### Example 54

Okkonen, J. 2013. Theses. Managing director, Oulu Chamber of Commerce. E-mail message on 3.6.2013.

For messages in newsgroups or discussion groups include the poster's last name, initial letter of first name, year, message heading, the phrase "cited", date and name of the newsgroup or discussion group.

#### Example 55

Ravitch, D. 2009. Critical thinking? You need knowledge. Cited 8.10.2009, [http://groups.google.fi/group/misc.kids/browse\\_thread/thread/ef8597ab78967170#](http://groups.google.fi/group/misc.kids/browse_thread/thread/ef8597ab78967170#).

For an interview on the Internet include the person's last name, the first initial of the first name, year, designation/title/position, organization, the phrase "a video interview", the phrase "cited", date and the Internet address.

#### Example 56

Malila, M. 2012. Physiotherapist (Master's degree). Video interview. Cited 28.1.2014, <http://www.oamk.fi/thesis/juhlajulkaisu/?sivu=7>.

For videos on the Internet, for example, on YouTube, include the author, year, the name/title of the video, the phrase "a video", the phrase "cited", date and the Internet address.

#### Example 57

Oamkextra 2014. Information Technology. Video. Cited 5.2.2014,  
[http://www.youtube.com/watch?v=jpig\\_7kvY8w](http://www.youtube.com/watch?v=jpig_7kvY8w).

For CDs and DVDs include author/organization, year, title, place of publication, publisher and type of recording (for example DVD, CD).

#### Example 58

Mattila, K. 1997. Wild rose. Helsinki: Ondine. CD.

#### Example 59

Kahn, S. L., Gaskin, G. M. & Sharp, V. L. 2007. Keats and Kahn's roentgen atlas of normal skeletal maturation. Philadelphia: Lippincott Williams & Wilkins. DVD.

### **Interviews, discussions, lectures**

For non-digital interviews, discussions and lectures include the person's last name, initial letter of first name, year, title/rank/position, organization, the word "interview", "discussion" or "lecture" and time. Recorded interviews, discussions and lectures are indicated by the phrase "In author's possession".

#### Example 60

Nystén, K. 2009. Office manager, Tekes, Washington D.C. Telephone interview 6.10.2009. In author's possession.

### **Many publications by the same author**

If publications by the same author are from the same year, they are distinguished by the letters a, b, c etcetera. Publications by the same author from different years are arranged by year of publication from oldest to newest.

#### Example 61

Jacso, P. 2008a. The pros and cons of computing the h-index using Web of Science. *OnlineInformation Review* 32 (5), 673.

Jacso, P. 2008b. The pros and cons of computing the h-index using Scopus. *Online Information Review* 32 (4), 524.

### **Missing information**

For example brochures may be missing some information. All missing information is enclosed in parentheses.

#### **Example 62**

Kuntoplus Oy 2014. Member's benefits. Brochure. (no listed place of publication).

## **5.7 Finalized Bachelor's thesis**

Bachelor's theses are primarily published in Theseus – The Open Repository of the Universities of Applied Sciences ([www.theseus.fi](http://www.theseus.fi)). A student may use a thesis published in Theseus for example to demonstrate his expertise when applying for a job. The student may, if he so wishes, publish his thesis on the Oulu University of Applied Sciences Intranet instead of Theseus. Theses published on the intranet are only accessible from computers within the Oulu University of Applied Sciences network. A thesis published on the intranet may be sent on interlibrary loan to other libraries.

If a thesis has several authors from the same degree programme of Oulu UAS, they together agree on the publishing and one of the authors saves the thesis into either Theseus or the intranet. If a Bachelor's thesis has been written for a client, the client must approve the publication of the thesis in Theseus. For example a Google search will find all Bachelor's theses published in Theseus. If the authors of the thesis are from different degree programmes of Oulu UAS, one student from each degree programme send the thesis to Theseus. If the authors of the thesis are all from different universities of applied sciences, the thesis must be reported both in the name of the author's home university and degree programme.

The student must delete from the thesis all personal contact information, such as postal and e-mail addresses and telephone numbers. The thesis is saved into Theseus ([www.theseus.fi](http://www.theseus.fi)) or the intranet ([intraweb.students.oamk.fi/tietoa\\_opiskelusta/opinnaytetyo/lahetys](http://intraweb.students.oamk.fi/tietoa_opiskelusta/opinnaytetyo/lahetys)), when it has been approved and finalized. The version saved into the above locations must be identical to the

approved thesis. It is not possible to make alterations to the document once it has been saved into either Theseus or the intranet.

Due to online publication, bound copies of Bachelor's theses for the use of Oulu University of Applied Sciences are no longer needed. If students wish to have their theses printed for their own use, they may do so at a bookbindery of their choice and at their own expense.

The student, together with the supervising teacher and the client, may also explore other possible ways of publishing the results of the Bachelor's thesis, such as journal articles, newspaper articles, seminar presentations, television and radio programmes.

### **Publishing the thesis in Theseus**

1. Convert your thesis into a PDF file. Name the file after your own name in the form Lastname\_Firstname, for example Smith\_John.pdf. Please note that only the following characters can be used in the filename: 1-9, a-z, A-Z, \_, -, and space. An example of how to replace a character with another one: Mäkinen → Makinen.
2. Go to [www.theseus.fi](http://www.theseus.fi). Click Go to submissions page.
3. Select a copyright license for your thesis.

The default option "All rights reserved" means that you retain full copyright to your thesis according to normal copyright legislation.

You can select the option "Creative Commons licence" if you have full copyright to your thesis or if you have the consent of the other copyright holders to use the licence. With a Creative Commons licence you are telling other users what they can do with your thesis.

Type your e-mail address in the box at the bottom of the page and click "Continue".

4. The system will give you a URN link that is the permanent address of your thesis on the Internet. You will also get a link that you must click to continue saving your thesis. Both links will also be sent to the e-mail address you have provided. Continue by clicking the link on the page.
5. In the Haka authentication form choose Oulu University of Applied Sciences from the dropdown menu and click "Select".

6. The Oulu University of Applied Sciences Shibboleth identity provider login page will open. Log in with your student ID.
7. Read and accept the terms of use for Theseus. Enter the metadata for your thesis and save the thesis in Theseus. By accepting the terms of use you also give permission to publish the thesis online.
8. You will receive confirmation by e-mail that your thesis has been saved in Theseus. Forward the e-mail message to the supervising teacher. After this the completion can be entered into Asio. The thesis will not immediately appear in Theseus. The library staff will first check the metadata of your thesis, after which it will be available for public use. If you experience problems, contact the library (theseus\_kirjasto@oamk.fi).

### **Publishing the thesis on the Intranet**

1. Convert your thesis into a PDF file. Name the file after your own name in the form Lastname\_Firstname, for example Smith\_John.pdf. Please note that only the following characters can be used in the filename: 1-9, a-z, A-Z, \_, -, and space. An example of how to replace a character with another one: Mäkinen → Makinen.
2. Log in to the student intranet  
([intraweb.students.oamk.fi/tietoa\\_opiskelusta/opinnaytetyo/lahetys](http://intraweb.students.oamk.fi/tietoa_opiskelusta/opinnaytetyo/lahetys)).
3. Enter the metadata of your thesis in the online form and attach the file in PDF format. Press "Continue" at the bottom of the page, after which you can still check the information you have entered. Accept the information.
4. You will receive confirmation by e-mail that your thesis has been saved in the intranet. Forward the e-mail message to the supervising teacher. After this the completion can be entered into Asio. The thesis will not immediately appear on the intranet. The library staff will first check the metadata of your thesis, after which it will be catalogued into the Oulu University of Applied Sciences library catalogue Leevi. The thesis will be accessible from computers within the Oulu University of Applied Sciences network. It may also be sent on interlibrary loan to other libraries. If you experience problems, contact the library (theseus\_kirjasto@oamk.fi).

## 6 ASSESSMENT

The student improves his learning by self-assessment throughout the Bachelor's thesis process. The student receives feedback on his thesis from the supervising teacher, the client and from the peer reviewers at the seminars. Bachelor's theses are graded by the staff of the Oulu University of Applied Sciences. (See appendices 6–9.) A successfully completed Bachelor's thesis follows the objectives of the student's degree programme, the instructions for Bachelor's theses and ethical principles. Bachelor's theses are graded on a numerical scale of 0–5. The aspects taken into consideration in the assessment are choice and planning of subject, implementation, written reporting and the whole Bachelor's thesis process, taking into account the nature of the Bachelor's thesis (see tables 3–6). More specific assessment criteria may be provided for different degree programmes. The grade is awarded for the entire thesis and describes the quality of the whole process. In addition to the grade, the student will receive feedback on his Bachelor's thesis if he wishes.

*TABLE 3. Assessment criteria for choice and planning of subject and description of grades used*

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Connection of subject to professional field and expertise	The subject has a clear connection to the professional field and it plays an important role in developing the student's expertise.	The subject is connected to the professional field and it is related to the student's professional development.	The subject makes only a minor contribution to the development of the field and the student's professional development.	The subject has no connection to the professional field.
	The subject is valuable for practical activity and important for working life and its development.	The subject is valuable and well-reasoned from a worklife perspective.	Working life/client is able to utilize the subject only on a small scale.	
	The subject is of current interest, new, creative, demanding.	The subject is of current interest and typical of the field	The subject is unoriginal.	
Development/ research task and its definition	The development/research task and its definition are clear.	The development/ research task and its definition are clear.	The development /research task is unclear and its definition is vague.	The development/research has not been defined.
	The results of the work aim at achieving practical value and the purpose of the work is to bring a new angle to the subject.	The results of the work aim at developing working life.	The results aimed at are vaguely defined.	
Purpose and objectives	The purpose and objectives of the thesis are well-founded from the perspectives of working life and theoretical foundation. The intention is to apply the results of the work to the development of the professional field.	The purpose and objectives of the thesis aim at developing the professional field.	The objectives set for the thesis aim at development, but they remain unconnected and without justification.	The purpose and objectives of the thesis are vaguely defined and the work does not follow the approved plan.

**TABLE 4. Assessment criteria for implementation and description of grades used**

<b>Assessment criterion</b>	<b>Excellent (5)</b>	<b>Good (4–3)</b>	<b>Satisfactory (2–1)</b>	<b>Fail (0) / Unfinished</b>
Theoretical foundation	The theoretical foundation conveys the author's own, critical and creative thinking. It is well-considered, topical and suitable for the task. It is based on scientific research, international sources and expert knowledge.	The theoretical foundation is diversified and suitable for the task. It is based on the most important sources in the professional field.	The theoretical foundation is illogical or based only on a few sources. It is based on standard sources in the professional field.	The theoretical foundation is noticeably limited and selected uncritically.
Material and methodological choices	<p>The material is extensive considering the objective of the thesis.</p> <p>The acquisition of material and work methods are well-founded and their use is well-controlled.</p>	<p>The material is sufficient.</p> <p>The acquisition of material and work methods are well-founded.</p>	<p>The material is limited.</p> <p>The acquisition of material and work methods have been inadequately determined or their use is inconsistent.</p>	<p>The material is insufficient.</p> <p>The acquisition of material and work methods are unsuitable for the task or they have not been described.</p>
Treatment and analysis of material	The treatment and analysis of the material is knowledgeable and analytical. It shows innovativeness and consistency in the approach to the work.	The treatment and analysis of the material is reliable. It illustrates the author's familiarity with the subject	The treatment and analysis of the material is limited.	The treatment and analysis of the material is inconsistent and inadequate.
Product	The implementation of the product is technically / artistically / aesthetically original, creates new value and its quality is excellent.	The product has no faults and its quality is good.	The product is acceptable but unoriginal.	The author's input is missing from the product and/or it has been copied.
Results and conclusions / development proposals	The objectives set for the work have been reached and justified. The conclusions / development proposals are expertly presented. The practical application of the results has been proved feasible and their significance has been evaluated.	The objectives set for the work have been reached and justified. The conclusions / development proposals are unoriginal. Achieved results can be applied to the development of the professional field.	The objectives set for the work have not been fully reached and justified. Achieved results are not significant for the development of the professional field.	The objectives set for the work have not been reached. The results have been wrongly interpreted. No conclusions / development proposals have been presented.



*TABLE 5. Assessment criteria for written reporting and description of grades used*

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Written reporting	The language of the report is professional, its structure well-articulated and the external appearance impeccable. The report describes the Bachelor's thesis process and the results extensively and reliably.	The language of the report is professional and its structure well-articulated. It describes the Bachelor's thesis process and the results.	The language of the report is easy to understand. There are deficiencies in the structure and the external appearance. The report does not fully describe the Bachelor's thesis process and the results.	There are a lot of errors in the language of the report. There are significant shortcomings in the structure and the external appearance. The suggested corrections have not been made.

*TABLE 6. Assessment criteria for the process and description of grades used*

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Progress and success of the process	The work has progressed in a methodical and goal-oriented manner throughout the process.	The work has progressed in a methodical and goal-oriented manner throughout the process.	The work has progressed inconsistently to a certain extent. Deviations from plans have not been discussed with the supervisor.	The student has been incapable of methodical and goal-oriented work. The schedule agreed upon has not been followed and the reasons for this have not been given.
	Supervisors' expertise has been utilized during the process and the student has acted responsibly and shown initiative during different stages of the process.	The student has sought for advice and been able to utilize it. Cooperation with different parties has been smooth.	The student has utilized advice inadequately, indiscriminately and rigidly.	The student has been unable to seek guidance or to look for answers to the questions that have arisen.
	The student has critically examined his own Bachelor's thesis process, sought for alternative solutions and put forward development proposals.	The student has critically examined his own Bachelor's thesis process without bringing forward alternative courses of action.	The student's self-assessment of his own work has been inadequate.	The student is incapable of assessing his own work.
	The student has been able to plan and implement his Bachelor's thesis on his own within available resources (time, money, physical and mental resources, knowledge).	The student has been able to plan and implement his Bachelor's thesis within available resources (time, money, physical and mental resources, knowledge).	The thesis is brief considering the resources allocated for it or the student has concentrated on trivial issues.	The suitability of the demands and the scope of the work to the student's competence and resources has been misjudged.
	The process has added to the student's professional expertise. He has shown during different stages of the process that he is capable of professional dialogue and of displaying and sharing his expertise.	The process has supported the development of the student's expertise. The student is capable of professional dialogue.	The process has added to the student's skills and knowledge and he is capable of displaying them.	The process hasn't improved the student's professional skills.

A student who is not satisfied with the grading of his Bachelor's thesis may appeal for reassessment to the teacher who has graded the thesis within 14 days of the disclosure of both the results and the information how the assessment criteria have been applied in his case. If the student is still dissatisfied, he may apply for reassessment to the Degree Board of the Oulu University of Applied Sciences within 14 days. (Laki ammattikorkeakoululain muuttamisesta ja väliaikaisesta muuttamisesta 564/2009 6:27 §; Ammattikorkeakoulun hallitus 2003; Valtioneuvoston asetus ammattikorkeakouluista annetun valtioneuvoston asetuksen muuttamisesta 546/2013 5:20 §.) Further information on how to apply for reassessment is available at student intranet Oiva (<https://oiva.oamk.fi/>).

Students may attempt to raise the grade of their failed Bachelor's thesis. The School decides on counselling the student if after two attempts, the grade is still fail. The student has the right to raise an approved grade of a study module once. The opportunity to raise the grade lasts for the following two terms. The best grade achieved will remain in force. (Ammattikorkeakoulun hallitus 2012.) Raising the grade requires that the student is still eligible to study at the school. Attempting to raise the grade of the Bachelor's thesis will not entitle a student to a discretionary extension to his eligibility period.

Various competitions are arranged for Bachelor's theses. More information is available from thesis counsellors.

## 7 MATURITY TEST

For a Bachelor's degree at a university of applied sciences you must take a maturity test, that is to write a text related to your Bachelor's thesis which demonstrates your familiarity with the field of study and your command of either Finnish or Swedish (Valtioneuvoston asetus ammattikorkeakouluista annetun valtioneuvoston asetuksen muuttamisesta 423/2005 3:10 §). Every student must write the maturity test independently.

The text must be coherent and well-structured with regard to both structure, content and style. In the maturity test the student applies the knowledge and skills acquired during the Bachelor's thesis process and demonstrates his written communication skills in his professional field and his mastery of different text types.

Students who have been educated in Finnish or Swedish write their maturity test in the language of their school education. For them the language of the degree programme has no influence on the language of the maturity test. Students who have been educated abroad or in another language than Finnish or Swedish write their maturity test in English. You may apply to change the language of your maturity test for justifiable causes. The matter will be decided by the school.

For the maturity test the student writes an essay under supervised conditions after the Bachelor's thesis has been accepted. The essay has one topic or the student can select one from the given choices. The topics of the essays have included, for example, the following: The possibilities and problems of the topic of the thesis, Comparison of the solutions based on the results of the thesis, What are the key factors and most common development targets of the topic of the thesis?, How did completing the thesis increase your professional competence?, Discuss what is the significance of your thesis to the line of work and its development. The teacher who has supervised the thesis and the supervisor of the text will assess the maturity test. The maturity test is assessed as either passed or failed (Ammattikorkeakoulun hallitus 2012). The language of the maturity test is assessed using the following criteria:

- outlining (for example overall structure of the text, division into paragraphs, headings)
- understandability (for example self-sufficiency of the text, argumentation, claims and their justification)
- clarity (for example sentence structure, use of professional terminology, choice of words)

- style (formal style) and language (for example linguistic correctness, spelling, exterior appearance that follows the guidelines) (Suositukset kieltenopetuksen käytännöiksi ammattikorkeakouluissa 2006).

On application, it is possible to compensate the maturity test with an article in a journal or online publication, with a press release or with a seminar paper or poster in the field. A poster is a placard, which publicizes the thesis and its results, for example, at conferences (Kajaani University of Applied Sciences 2014, cited 7.1.2014). More information on creating a poster is available from the thesis counsellors and the lecturer of communication. The text must be written in good formal style, taking into consideration the demands of the publishing context. The aforementioned forms of publication are recommended, since they bring the results of the Bachelor's thesis into public attention. Writing for external publication channels is often an interactive process, and the text is influenced by the publication forum and often by the supervising teacher as well. For the application to be accepted, the student must display initiative and independence in his writing process. If a thesis is written by two students in cooperation the contribution of each student in the work must be clearly indicated. When the compensation of the maturity test with another text is considered, the two purposes set for the maturity test are taken into account: expertise in the field and proficiency in Finnish or Swedish. If for example a Finnish-speaking student has written an article in English, it may be used a proof of his expertise in the field. In this case it must be separately agreed how the student's proficiency in Finnish is proven.

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<b>I Parties</b>		
<b>Author (Student)</b>	First name	Last name
	Address	E-mail address
	Telephone number	Degree programme
<b>Client</b>	Name of organization	
	Supervisor of work/contact person	Address
	Telephone	E-mail
<b>Oulu University of Applied Sci- ences</b>	School	
	Supervising teacher	Address
	Telephone	E-mail
<b>Supervision of the Bachelor's thesis and responsibility</b>	<p>The responsibility for preparing the Bachelor's thesis and for the results is the author's. The responsibility of Oulu University of Applied Sciences is limited to normal supervision of the thesis.</p> <p>The Client undertakes to provide the author with all the public information and material required for the preparation of the Bachelor's thesis and to supervise the thesis work from the perspective of the client organization. If the preparation of the thesis requires examination of confidential information, a separate confidentiality agreement will be drawn up if necessary.</p>	
<b>Making the results public and confidentiality</b>	<p>The Bachelor's thesis is public in its entirety. If the thesis contains business secrets or other information deemed confidential under the Act on the Openness of Government Activities, the thesis report must be written in such a way that the confidentiality of the information is preserved. If necessary, the confidential information must be left in the background material of the thesis. The Bachelor's thesis is published in Theseus - the Open Repository of the Universities of Applied Sciences (<a href="http://www.theseus.fi">http://www.theseus.fi</a>) or on the Oulu University of Applied Sciences Intranet. The parties to the Bachelor's thesis process decide the publication channel when the Bachelor's thesis is completed.</p> <p>The author, the client and the supervisor of the Bachelor's thesis undertake to keep secret all confidential information and documents that have emerged during the preparation of the thesis and in the discussions before or after the preparation and to refrain from exploiting confidential information expressed by another party without separate permission.</p>	
<b>II Plan</b>		
<b>Bachelor's thesis</b>	Subject/working title	
	Objective and result of development/research task	
	Principal methods	

	The client will pay the student or the university of applied sciences for the work	<input type="checkbox"/> Yes <input type="checkbox"/> No
	A worklife representative has been nominated as the supervisor of the Bachelor's thesis	<input type="checkbox"/> Yes <input type="checkbox"/> No
	The client will utilize the results of the Bachelor's thesis in its activity	<input type="checkbox"/> Yes <input type="checkbox"/> No
	More detailed account in the Bachelor's thesis plan _____._____.20_____	
<b>Signature</b>	I accept the implementation and supervision of the Bachelor's thesis as specified in the sections Parties and Plan.	
	Date	Signature of supervising teacher
<b>III Terms of the agreement</b>		
<b>Rights to the results and other material, equipment and applications related to the Bachelor's thesis</b>	<p>Select A, B, C or D.</p> <p><b>A <input type="checkbox"/> Waiving the right to use (without right to alter)</b>  Copyright to the results of the Bachelor's thesis belong to the Author of the thesis.</p> <p>The Author grants the Client simultaneous right to use the Bachelor's thesis and the material related to it. The Client is allowed to make copies of the thesis, present and display the material and distribute copies of the thesis. The Client has no right to alter the thesis without the Author's permission. Other use must be separately agreed upon in writing.</p> <p>The Client may not transfer the right to use specified in this agreement to a third party. The right to use will be valid until _____._____.20_____.</p> <p>The Author transfer to OUAS simultaneous right to use the Bachelor's thesis and the material related to it without separate compensation. The right to use gives OUAS the right to store the thesis and the material related to it and use it for teaching and research purposes, library services, in the presentation and marketing of its activity and in other normal activity.</p> <p><b>B <input type="checkbox"/> Waiving the right to use (with right to alter)</b>  Copyright to the results of the Bachelor's thesis belong to the Author of the thesis.</p> <p>The Author grants the Client simultaneous right to use the Bachelor's thesis and the material related to it. The Client may make copies of the thesis, present and display the material and distribute copies of the thesis and make the alterations necessary for distributing the thesis and making it available to the public. Other use must be separately agreed upon in writing.</p> <p>The Client may not transfer the right to use specified in this agreement to a third party. The right to use will be valid until _____._____.20_____.</p> <p>The Author transfers to OUAS simultaneous right to use the Bachelor's thesis and the material related to it without separate compensation. The right to use gives OUAS the right to store the thesis and the material related to it and use it for teaching and research purposes, library services, in the presentation and marketing of its activity and in other normal activity.</p> <p><b>C <input type="checkbox"/> All economic copyrights are transferred to the Client</b>  The Author transfers to the Client all economic copyrights related to the Bachelor's thesis and its results. The Client has the right to further transfer the rights specified in this agreement to a third party without consulting the Author and to make the alterations necessary for distributing the thesis and making it available to the public.</p> <p>The transfer of rights includes, but it is not restricted to, all rights to alter, transmit, present in public and distribute a recording, transfer it to another media and make copies (also excerpts) for presentation, sale, rental or other distribution by utilising electronic, analog or digital technology, CD and DVD formats, multimedia, print media, information networks and video rental systems and other corresponding technological solutions, regardless of distribution method.</p> <p>The Author assures that he has the right to transfer all the above rights and that to the best of his knowledge the rights in question do not infringe the rights of any third party.</p> <p>The Client transfers to OUAS simultaneous right to use the Bachelor's thesis and the material related to it without separate compensation. The right to use gives OUAS the right to store the thesis and the material related to it and use it for teaching and research purposes, library services, in the presentation and marketing of its activity and in other normal activity.</p> <p><b>D <input type="checkbox"/> Copyright is separately agreed upon</b>  The Author and the Client have agreed the following regarding the transfer of copyright to the Bachelor's thesis and its results:</p> <p>_____</p> <p>_____</p> <p>_____</p>	
	<b>Compensation</b>	<p>Select E, F or G.</p> <p>E <input type="checkbox"/> As compensation for work done and/or for the transfer of copyright the Client agrees to pay the Author _____._____.20_____ € by _____._____.20_____.</p> <p>F <input type="checkbox"/> Compensation has been separately agreed upon.</p> <p>G <input type="checkbox"/> An author is not paid compensation neither for work done nor for the transfer of copyright.</p> <p>Employment  Possible employment is separately agreed between by the Client and the Author. Students working on their Bachelor's thesis are covered by the accident insurance provided by Oulu University of Applied Sciences if they are not employed by the Client.</p>



<b>Expenses of the Bachelor's thesis</b>	Reimbursement of possible expenses incurred during the Bachelor's thesis process (acquisition of material, raw materials, travel expenses, compensation for work etc.) will be agreed between the client and the author. The university of applied sciences is not responsible for paying the expenses of individual Bachelor's theses.	
<b>Signatures</b>	We, the undersigned, have agreed upon the implementation and supervision of the Bachelor's thesis as specified in this agreement. The estimated date of completion of the Bachelor's thesis is _____.20_____.	
	Date	Signature of student
	Date	Signature of client

## INFORMATION FOR THE REPORT COVER

APPENDIX 2



First name Last name

## TITLE OF THE BACHELOR'S THESIS

Possible subtitle

**TITLE OF THE BACHELOR'S THESIS**

Possible subtitle

First name Last name  
Bachelor's thesis  
Term (e.g. Spring) year  
Name of degree programme  
Oulu University of Applied Sciences

## ABSTRACT

## APPENDIX 4

Oulu University of Applied Sciences  
"Degree programme", "option"

---

Author(s):

Title of Bachelor's thesis:

Supervisor(s):

Term and year of completion:

Number of pages: e.g. 60 + 5 appendices

---

*Remember to include the following in the abstract:*

*Why – background for the thesis, client*

*What – objective of the thesis*

*How – background knowledge applied, research methods, material used*

*Achievements – main results*

*Exploitability – conclusions, development proposals, further measures*

*The length of the abstract is maximum one page.*

---

Keywords:

*List 3–7 keywords that describe your thesis. Use for example keywords from the following controlled vocabulary thesauri:*

*MeSH <http://www.yso.fi/onto/mesh/conceptscheme>*

*Agriforest [http://www-db.helsinki.fi/agri/agrisanasto/Welcome\\_eng.html](http://www-db.helsinki.fi/agri/agrisanasto/Welcome_eng.html)*

*Helecon <http://web.lib.aalto.fi/en/helevoc/?dbname=MIX>*

Oulun ammattikorkeakoulu  
"Koulutusohjelma", "suuntautumisvaihtoehto"

---

Tekijä(t):

Opinnäytetyön nimi:

Työn ohjaaja(t):

Työn valmistumislukukausi ja -vuosi:

Sivumäärä: *esim. 60 + 5 liitesivua*

---

*Kirjoita tiivistelmään seuraavat asiat:*

*Miksi – Työn tausta, toimeksiantaja*

*Mitä – Työn tavoite*

*Miten – Sovellettu tietoperusta, tutkimusmenetelmät, käytetyt aineistot*

*Mitä saavutettu – Päätulokset*

*Miten hyödynnettävissä – Johtopäätökset, kehitysehdotukset, jatkotoimenpiteet*

*Tiivistelmän pituus on 1 sivu.*

---

Asiasanat:

*Kirjoita 3–7 kpl työtäsi kuvaavaa asiasanaa. Käytä hyväksesi esimerkiksi yleistä suomalaista asiasanastoa (YSO)*

*<http://finto.fi/ysa/fi/>*

Information on Bachelor's thesis	Student's first name	Student's last name
	Title of Bachelor's thesis	
	Degree programme	

Consider the merits and shortcomings of your Bachelor's thesis. Assess the choice of subject for the thesis and its planning, implementation, written report and the overall thesis process. Justify your assessment using the grade descriptions below. Assign your thesis an overall grade.

TABLE 1. Assessment criteria for choice and planning of subject and description of grades used

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Connection of subject to professional field and expertise	The subject has a clear connection to the professional field and it plays an important role in developing the student's expertise.	The subject is connected to the professional field and it is related to the student's professional development.	The subject makes only a minor contribution to the development of the field and the student's professional development.	The subject has no connection to the professional field.
	The subject is valuable for practical activity and important for working life and its development.	The subject is valuable and well-reasoned from a worklife perspective.	Working life/client is able to utilize the subject only on a small scale.	
	The subject is of current interest, new, creative, demanding.	The subject is of current interest and typical of the field.	The subject is unoriginal.	
Development / research task and its definition	The development/research task and its definition are clear.	The development/research task its definition are clear.	The development/research task is unclear and its definition is vague.	The development/research task has not been defined.
	The results of the work aim at achieving practical value and the purpose of the work is to bring a new angle to the subject.	The results of the work aim at developing working life.	The results aimed at are vaguely defined.	
Purpose and objectives	The purpose and objectives of the thesis are well-founded from the perspectives of working life and theoretical foundation. The intention is to apply the results of the work to the development of the professional field.	The purpose and objectives of the thesis aim at developing the professional field.	The objectives set for the thesis aim at development, but they remain unconnected and without justification.	The purpose and objectives of the thesis are vaguely defined and the work does not follow the approved plan.

Assess the choice of subject for your Bachelor's thesis and its planning. Justify your assessment using the grade descriptions in table 1:

<b>Assessment</b>	Choice of subject for Bachelor's thesis and its planning
-------------------	--

TABLE 2. Assessment criteria for implementation and description of grades used

Assessment criterion	Excellent (5)	Good (4-3)	Satisfactory (2-1)	Fail (0) / Unfinished
Theoretical foundation	The theoretical foundation conveys the author's own, critical and creative thinking. It is well-considered, topical and suitable for the task. It is based on scientific research, international sources and expert knowledge.	The theoretical foundation is versatile and suitable for the task. It is based on the most important sources in the professional field.	The theoretical foundation is illogical or based only on a few sources. It is based on standard sources in the professional field.	The theoretical foundation is noticeably limited and selected uncritically.
Material and methodological choices	The material is extensive considering the objective of the thesis.  The acquisition of material and work methods are well-founded and their use is well-controlled.	The material is sufficient.  Acquisition of material and work methods are well-founded.	The material is limited.  Acquisition of material and work methods have been inadequately determined or their use is inconsistent.	The material is insufficient.  Acquisition of material and work methods are unsuitable for the task or they have not been described.
Treatment and analysis of material	The treatment and analysis of material is knowledgeable and analytical. It shows innovativeness and consistency in the approach to the work.	The treatment and analysis of material is reliable. It illustrates the author's familiarity with the subject.	The treatment and analysis of material is limited.	The treatment and analysis of material is inconsistent and inadequate.
Product	The implementation of the product is technically / artistically / aesthetically original, creates new value and its quality is excellent.	The product has no faults and its quality is good.	The product is acceptable but unoriginal.	The author's input is missing from the product and/or it has been copied.
Results and conclusions / development proposals	The objectives set for the work have been reached and justified. The conclusions / development proposals have been expertly presented. The practical application of the results has been proved feasible and their significance has been evaluated.	The objectives set for the work have been reached and justified. The conclusions / development proposals are unoriginal. Achieved results can be applied to the development of the professional field.	The objectives set for the work have not been fully reached and justified. Achieved results are not significant for the development of the professional field.	The objectives set for the work have not been reached. The results have been wrongly interpreted. No conclusions / development proposals have been presented.

Assess the implementation of your Bachelor's thesis. Justify your assessment using the grade descriptions in table 2:

<b>Assessment</b>	Implementation of Bachelor's thesis

TABLE 3. Assessment criteria for written reporting and description of grades used

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Written reporting	The language of the report is professional, its structure well-articulated and the external appearance impeccable. The report describes the Bachelor's thesis process and the results extensively and reliably.	The language of the report is professional and its structure well-articulated. It describes the Bachelor's thesis process and the results.	The language of the report is easy to understand. There are deficiencies in the structure and the external appearance. The report does not fully describe the Bachelor's thesis process and the results.	There are a lot of errors in the language of the report. There are significant shortcomings in the structure and the external appearance. The suggested corrections have not been made.

Assess the written reporting of your Bachelor's thesis. Justify your assessment using the grade descriptions in table 3:

<b>Assessment</b>	Written reporting of the Bachelor's thesis



TABLE 4. Assessment criteria for the process and description of grades used

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Progress and success of the process	The work has progressed in a methodical and goal-oriented manner throughout the process.	The work has progressed in a methodical and goal-oriented manner throughout the process.	The work has progressed inconsistently to a certain extent. Deviations from plans have not been discussed with the supervisor.	The student has been incapable of methodical and goal-oriented work. The schedule agreed upon has not been followed and the reasons for this have not been given.
	Supervisors' expertise has been utilized during the process and the student has acted responsibly and shown initiative during different stages of the process.	The student has sought for advice and been able to utilize it. Cooperation with different parties has been smooth.	The student has utilized advice inadequately, indiscriminately and rigidly.	The student has been unable to seek guidance or to look for answers to the questions that have arisen.
	The student has critically examined his own Bachelor's thesis process, sought for alternative solutions and put forward development proposals.	The student has critically examined his own Bachelor's thesis process without bringing forward alternative courses of action.	The student's self-assessment of his own work has been inadequate.	The student is incapable of assessing his own work.
	The student has been able to plan and implement his Bachelor's thesis on his own within available resources (time, money, physical and mental resource, knowledge).	The student has been able to plan and implement his Bachelor's thesis within available resources (time, money, physical and mental resources, knowledge).	The thesis is brief considering the resources allocated for it or the student has concentrated on trivial issues.	The suitability of the demands and the scope of the work to the student's competence and resources has been misjudged.
	The process has added to the student's professional expertise. He has shown during different stages of the process that he is capable of professional dialogue and of displaying and sharing his expertise.	The process has supported the development of the student's expertise. The student is capable of professional dialogue.	The process has added to the student's skills and knowledge and he is capable of displaying them.	The process hasn't improved the student's professional skills.

Assess your Bachelor's thesis process. Justify your assessment using the grade descriptions in table 4:

<b>Assessment</b>	Bachelor's thesis process
-------------------	---------------------------

<b>Overall assessment</b>	Overall grade for the Bachelor's thesis (0–5):	
	How can the Bachelor's thesis process at the Oulu University of Applied Sciences be improved?	
<b>Publication</b>	I will publish my Bachelor's thesis <input type="checkbox"/> in Theseus – the Open Repository of Universities of Applied Sciences ( <a href="http://www.theseus.fi">www.theseus.fi</a> ) <input type="checkbox"/> on the Oulu University of Applied Sciences Intranet	
<b>Date and signature</b>	Date	Signature

## CLIENT FEEDBACK ON THE BACHELOR'S THESIS AND RELATED PRACTICES

## APPENDIX 7

Dear representative of a cooperation partner!

You have offered a student/students of the Oulu University of Applied Sciences a valuable connection to working life. We respectfully request for feedback on a Bachelor's thesis made at your organization. Your feedback is important to both the student and to the Oulu University of Applied Sciences for developing the Bachelor's thesis process. THANK YOU!

Name and position of the person giving feedback	
Company/organization	
Author(s) of Bachelor's thesis	
Title of Bachelor's thesis	
How well were the purpose and objectives of the thesis realized? <input type="checkbox"/> Excellently <input type="checkbox"/> Well <input type="checkbox"/> Satisfactorily <input type="checkbox"/> Badly	
How was the cooperation with the author(s) of the Bachelor's thesis? <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Satisfactory <input type="checkbox"/> Bad	
How can the results of the Bachelor's thesis be utilized in practice?	
How would you like to develop the cooperation on Bachelor's theses between your organization and the Oulu University of Applied Sciences?	
The client and the student have made the binding agreement, that the Bachelor's thesis will be published <input type="checkbox"/> in Theseus - the Open Repository of the Universities of Applied Sciences ( <a href="http://www.theseus.fi">www.theseus.fi</a> ) <input type="checkbox"/> on the Oulu University of Applied Sciences Intranet	
Date	Signature

<b>Bachelor's thesis information</b>	Author of Bachelor's thesis	Peer reviewer
	Title of Bachelor's thesis	
	Degree Programme	

Consider the merits and shortcomings of the Bachelor's thesis under peer assessment. Assess the choice of subject for the thesis and its planning, implementation, written report and the overall process. Justify your assessment using the grade descriptions below.

TABLE 1. Assessment criteria for choice and planning of subject and description of grades used

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Connection of subject to professional field and expertise	The subject has a clear connection to the professional field and it plays an important role in developing the student's expertise.	The subject is connected to the professional field and it is related to the student's professional development.	The subject makes only a minor contribution to the development of the field and the student's professional development.	The subject has no connection to the professional field.
	The subject is valuable for practical activity and important for working life and its development.	The subject is valuable and well-reasoned from a worklife perspective.	Working life/client is able to utilize the subject only on a small scale.	
	The subject is of current interest, new, creative, demanding.	The subject is of current interest and typical of the field.	The subject is unoriginal.	
Development / research task and its definition	The development/research task and its definition are clear.	The development/research task and its definition are clear.	The development/research task is unclear and its definition is vague.	The development/research task is missing.
	The results of the work aim at achieving practical value and the purpose of the work is to bring a new angle to the subject.	The results of the work aim at developing working life.	The results aimed at are vaguely defined.	
Purpose and objectives	The purpose and objectives of the thesis are well-founded from the perspectives of working life and theoretical foundation. The intention is to apply the results of the work to the development of the professional field.	The purpose and objectives of the thesis aim at developing the professional field.	The objectives set for the thesis aim at development, but they remain unconnected and without justification.	The purpose and objectives of the thesis are vaguely defined and the work does not follow the approved plan.

Assess the choice of subject for the Bachelor's thesis and its planning. Justify your assessment using the grade descriptions in table 1:

<b>Assessment</b>	Choice of subject for Bachelor's thesis and its planning
-------------------	--

TABLE 2. Assessment criteria for implementation and description of grades used

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Theoretical foundation	The theoretical foundation conveys the author's own, critical and creative thinking. It is well-considered, topical and suitable for the task. It is based on scientific research, international sources and expert knowledge.	The theoretical foundation is diversified and suitable for the task. It is based on the most important sources in the professional field.	The theoretical foundation is illogical or based only on a few sources. It is based on standard sources in the professional field.	The theoretical foundation is noticeably limited and selected uncritically.
Material and methodological choices	The material is extensive considering the objective of the thesis.  The acquisition of material and work methods are well-founded and their use is well-controlled.	The material is sufficient.  The acquisition of material and work methods are well-founded.	The material is limited.  The acquisition of material and work methods have been inadequately determined or their use is inconsistent.	The material is insufficient.  The acquisition of material and work methods are unsuitable for the task or they have not been described.
Treatment and analysis of material	The treatment and analysis of material is knowledgeable and analytical. It shows innovativeness and consistency in the approach to the work.	The treatment and analysis of material is trustworthy. It illustrates the author's familiarity with the subject.	The treatment and analysis of material is limited.	The treatment and analysis of material is inconsistent and inadequate.
Product	The implementation of the product is technically / artistically / aesthetically original, creates new value and its quality is excellent.	The product has no faults and its quality is good.	The product is acceptable but unoriginal.	The author's input is missing from the product and/or it has been copied.
Results and conclusions / development proposals	The objectives set for the work have been reached and justified. The conclusions / development proposals are expertly presented. The application of the results has been shown and its significance has been assessed.	The objectives set for the work have been reached and justified. The conclusions / development proposals are unoriginal. Achieved results can be applied to the development of the professional field.	The objectives set for the work have not been fully reached and justified. Achieved results are not significant for the development of the professional field.	The objectives set for the work have not been reached. The results have been wrongly interpreted. No conclusions / development proposals have been presented.

Assess the implementation of the Bachelor's thesis. Justify your assessment using the grade descriptions in table 2:

<b>Assessment</b>	Implementation of Bachelor's thesis
-------------------	-------------------------------------

*TABLE 3. Assessment criteria for written reporting and description of grades used*

<b>Assessment criterion</b>	<b>Excellent (5)</b>	<b>Good (4–3)</b>	<b>Satisfactory (2–1)</b>	<b>Fail (0) / Unfinished</b>
Written reporting	The language of the report is professional, its structure well-articulated and the external appearance impeccable. The report describes the Bachelor's thesis process and the results extensively and reliably.	The language of the report is professional and its structure well-articulated. It describes the Bachelor's thesis process and the results.	The language of the report is easy to understand. There are deficiencies in the structure and the external appearance. The report does not fully describe the Bachelor's thesis process and the results.	There are a lot of errors in the language of the report. There are significant shortcomings in the structure and the external appearance. The suggested corrections have not been made.

Assess the written reporting of the Bachelor's thesis. Justify your assessment using the grade descriptions in table 3:

<b>Assessment</b>	Written reporting of the Bachelor's thesis
-------------------	--

TABLE 4. Assessment criteria for the process and description of grades used

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Progress and success of the process	The student has critically examined his own Bachelor's thesis process, sought for alternative solutions and put forward development proposals.	The student has critically examined his own Bachelor's thesis process without bringing forward alternative courses of action.	The student's self-assessment of his own work has been inadequate.	The student is incapable of assessing his own work.
	The process has added to the student's professional expertise. He has shown during different stages of the process that he is capable of professional dialogue and of displaying and sharing his expertise.	The process has supported the development of the student's expertise. The student is capable of professional dialogue.	The process has added to the student's skills and knowledge and he is capable of displaying them.	The process hasn't improved the student's professional skills.

Assess the Bachelor's thesis process. Justify your assessment using the grade descriptions in table 4:

<b>Assessment</b>	Bachelor's thesis process	
<b>Date and signature</b>	Date	Signature

<b>Bachelor's thesis information</b>	Student	Supervisor/assessor of Bachelor's thesis
	Title of Bachelor's thesis	
	Degree programme	

*TABLE 1. Assessment criteria for choice and planning of subject and description of grades used*

<b>Assessment criterion</b>	<b>Excellent (5)</b>	<b>Good (4-3)</b>	<b>Satisfactory (2-1)</b>	<b>Fail (0) / Unfinished</b>
Connection of subject to professional field and expertise	The subject has a clear connection to the professional field and it plays an important role in developing the student's expertise.	The subject is connected to the professional field and it is related to the student's professional development.	The subject makes only a minor contribution to the development of the field and the student's professional development.	The subject has no connection to the professional field.
	The subject is valuable for practical activity and important for working life and its development.	The subject is valuable and well-reasoned from a worklife perspective.	Working life/client is able to utilize the subject only on a small scale.	
	The subject is of current interest, new, creative, demanding.	The subject is of current interest and typical of the field	The subject is unoriginal.	
Development/research task and its definition	The development/research task and its definition are clear.	The development/research task and its definition are clear.	The development/research task is unclear and its definition is vague.	The development/research task has not been defined.
	The results of the work aim at achieving practical value and the purpose of the work is to bring a new angle to the subject.	The results of the work aim at developing working life.	The results aimed at are vaguely defined.	
Purpose and objectives	The purpose and objectives of the thesis are well-founded from the perspectives of working life and theoretical foundation. The intention is to apply the results of the work to the development of the professional field.	The purpose and objectives of the thesis aim at developing the professional field.	The objectives set for the thesis aim at development, but they remain unconnected and without justification.	The purpose and objectives of the thesis are vaguely defined and the work does not follow the approved plan.



Assess the choice of subject for the Bachelor's thesis and its planning. Justify the assessment using the grade descriptions in table 1:

<b>Assessment</b>	Choice of subject for Bachelor's thesis and its planning
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TABLE 2. Assessment criteria for implementation and description of grades used

Assessment criterion	Excellent (5)	Good (4-3)	Satisfactory (2-1)	Fail (0) / Unfinished
Theoretical foundation	The theoretical foundation conveys the author's own, critical and creative thinking. It is well-considered, topical and suitable for the task. It is based on scientific research, international sources and expert knowledge.	The theoretical foundation is versatile and suitable for the task. It is based on the most important sources in the professional field.	The theoretical foundation is illogical or based only on a few sources. It is based on standard sources in the professional field.	The theoretical foundation is noticeably limited and selected uncritically.
Material and methodological choices	The material is extensive considering the objective of the thesis.  The acquisition of material and work methods are well-founded and their use is well-controlled.	The material is sufficient.  The acquisition of material and work methods are well-founded.	The material is limited.  The acquisition of material and work methods have been inadequately determined or their use is inconsistent.	The material is insufficient.  The acquisition of material and work methods are unsuitable for the task or they have not been described.
Treatment and analysis of material	The treatment and analysis of material is knowledgeable and analytical. It shows innovativeness and consistency in the approach to the work.	The treatment and analysis of material is reliable. It illustrates the author's familiarity with the subject.	The treatment and analysis of material is limited.	The treatment and analysis of material is inconsistent and inadequate.
Product	The implementation of the product is technically / artistically / aesthetically original, creates new value and its quality is excellent.	The product has no faults and its quality is good.	The product is acceptable but unoriginal.	The author's input is missing from the product and/or it has been copied.
Results and conclusions / development proposals	The objectives set for the work have been reached and justified. The conclusions / development proposals have been expertly presented. The practical application of the results has been proved feasible and their significance has been evaluated.	The objectives set for the work have been reached and justified. The conclusions / development proposals are unoriginal. Achieved results can be applied to the development of the professional field.	The objectives set for the work have not been fully reached and justified. Achieved results are not significant for the development of the professional field.	The objectives set for the work have not been reached. The results have been wrongly interpreted. No conclusions / development proposals have been presented.

Assess the implementation of the Bachelor's thesis. Justify the assessment using the grade descriptions in table 2:

<b>Assessment</b>	Implementation of Bachelor's thesis
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*TABLE 3. Assessment criteria for written reporting and description of grades used*

<b>Assessment criterion</b>	<b>Excellent (5)</b>	<b>Good (4–3)</b>	<b>Satisfactory (2–1)</b>	<b>Fail (0) / Unfinished</b>
Written reporting	The language of the report is professional, its structure well-articulated and the external appearance impeccable. The report describes the Bachelor's thesis process and the results extensively and reliably.	The language of the report is professional and its structure well-articulated. It describes the Bachelor's thesis process and the results.	The language of the report is easy to understand. There are deficiencies in the structure and the external appearance. The report does not fully describe the Bachelor's thesis process and the results.	There are a lot of errors in the language of the report. There are significant shortcomings in the structure and the external appearance. The suggested corrections have not been made.

Assess the written reporting of the Bachelor's thesis. Justify the assessment using the grade descriptions in table 3:

<b>Assessment</b>	Written reporting of the Bachelor's thesis
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TABLE 4. Assessment criteria for the process and description of grades used

Assessment criterion	Excellent (5)	Good (4–3)	Satisfactory (2–1)	Fail (0) / Unfinished
Progress and success of the process	The work has progressed in a methodical and goal-oriented manner throughout the process.	The work has progressed in a methodical and goal-oriented manner throughout the process.	The work has progressed inconsistently to a certain extent. Deviations from plans have not been discussed with the supervisor.	The student has been incapable of methodical and goal-oriented work. The schedule agreed upon has not been followed and the reasons for this have not been given.
	Supervisors' expertise has been utilized during the process and the student has acted responsibly and shown initiative during different stages of the process.	The student has sought for advice and been able to utilize it. Cooperation with different parties has been smooth.	The student has utilized advice inadequately, indiscriminately and rigidly.	The student has been unable to seek guidance or to look for answers to the questions that have arisen.
	The student has critically examined his own Bachelor's thesis process, sought for alternative solutions and put forward development proposals.	The student has critically examined his own Bachelor's thesis process without bringing forward alternative courses of action.	The student's self-assessment of his own work has been inadequate.	The student is incapable of assessing his own work.
	The student has been able to plan and implement his Bachelor's thesis on his own within available resources (time, money, physical and mental resource, knowledge).	The student has been able to plan and implement his Bachelor's thesis within available resources (time, money, physical and mental resources, knowledge).	The thesis is brief considering the resources allocated for it or the student has concentrated on trivial issues.	The suitability of the demands and the scope of the work to the student's resources has been misjudged.
	The process has added to the student's professional expertise. He has shown during different stages of the process that he is capable of professional dialogue and of displaying and sharing his expertise.	The process has supported the development of the student's expertise. The student is capable of professional dialogue.	The process has added to the student's skills and knowledge and he is capable of displaying them.	The process hasn't improved the student's professional skills.

Assess the Bachelor's thesis process. Justify the assessment using the grade descriptions in table 4:

<b>Assessment</b>	Bachelor's thesis process	
<b>Summary</b>	Overall grade for the Bachelor's thesis (0–5): Cooperative Bachelor's thesis project: <input type="checkbox"/> Yes <input type="checkbox"/> No The Bachelor's thesis is part of the R&D-project of the University of Applied Sciences: <input type="checkbox"/> Yes, part of a R&D-project Credits gained      or <input type="checkbox"/> No	
<b>Date and signature</b>	Date	Signature

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