



# MA THESIS GUIDE

Programme in  
Communication  
and Information  
Studies

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## **Preface**

Congratulations! At this point you have entered the stage at which you are going to write your Master's thesis. Students tend to look at writing the thesis as a big, individual project, in which not many practical tools are being provided. This thesis manual has been designed to give you the information you need to get you started on your project, as well as to help you throughout the writing process. Conducting research for the thesis and writing the thesis obviously requires commitment and effort, but it should also be remembered that doing your own research is also quite fun as well!

In Chapter 1 you can find some general information on the Master's thesis. Chapter 2 provides you with insights into the research and writing process. In the final chapter, you can find more information on the structure of the thesis. There are four appendices, consisting of the thesis agreement, a work plan (which needs to be appended to the thesis agreement), a thesis assessment form, and some information on hypothesis testing.

## Chapter 1: General information on the Master's thesis

The thesis is comparable to a final exam that every student must pass in order to graduate with a master's degree. In all probability it will be the most extensive research report that you will write during your master's programme. With it you demonstrate your ability to formulate research questions, conduct independent research, and present your results in written form according to the highest academic standards. You are of course not alone in this process; your supervisor(s) will be there to help guide your research and offer constructive feedback. However, the final responsibility for formulating a central research question, finding and processing relevant literature and source material, and applying concepts and methodologies that you have learned during your academic education, lies with you.

You are only permitted to start work on the thesis if you have completed the courses from the previous semester or obtained at least 24 credits.

### 1.1 Goals and objectives

The overall goal of the thesis is the development of research skills and the ability to analyse and present research results in a systematic and clear way. The thesis is the culmination of the study programme in which you will have to show that you are able to design and conduct research at an academic level and is able to theoretically reflect on a particular field of research relevant to the programme. In line with its overall goals and objective, the thesis demonstrates that you possess the following general academic and social skills and are able to apply them:

#### *Knowledge and understanding*

You are able to systematically and expediently collect and interpret information. He/she is able to read, understand and analyse academic and other complex texts. In this way, you acquire demonstrable knowledge and understanding that go further and deeper than the level of the Bachelor's programme and are capable of making an original contribution to the development and/or application of ideas.

#### *Applying knowledge and understanding*

You are able to apply knowledge, understanding and problem-solving skills in new or unfamiliar environments within a broader context that relates to his/her field of study. You are able to integrate knowledge and to deal with complex material.

#### *Making judgements*

You are able to discern general themes and make connections which are meaningfully supported by a wide variety of primary and secondary literature and primary sources where relevant. You are able to independently, critically and honestly formulate and defend a position.

#### *Communication*

You are able to present a complex problem clearly and concisely in written or spoken form to an audience of specialists and non-specialists.

#### *Combination of the above*

You are able to write a scientific paper in clear, effective and academic language and to deliver it

within an agreed period.

### *Learning skills*

You possess sufficient learning skills to tackle further studies that are largely self-directed or autonomous in nature.

## **1.2 Length and study load**

The master's thesis should be between 15,000 and 25,000 words in length; shorter or longer variations may be possible depending on the discipline. The thesis has a study load of 18 credits. That represents over 12 weeks (504 hours) of full-time study. Here is an example of how you might allocate your time:

- 10% of the time spent on reading relevant literature and making notes
- 20% of the time spent on collecting materials
- 20% of the time spent on analysing materials
- 15% of the time spent on writing up the report
- 5% of the time spent on producing the final (submittable) version of the report

These activities are not separate steps in completing the project and students regularly working on two or more of them at the same time (e.g., reading literature while collecting data or starting the write-up will still analysing materials).

## Chapter 2: The thesis process

### 2.1 Topic and supervisor

The beginning of the thesis process starts with identifying the research topic. You can choose their topic in different ways:

- List of options: You can choose from a list of thesis topics, presented during the MA-meeting in December. These topics correspond with the research projects of the academic staff. The supervision is carried out by the lecturer whose research corresponds with the thesis topic.
- Free choice of topics within established lines of research: You select their own topic, in consultation with the supervisor and on condition that it fits the lines of research established by the programme.
- Free choice of topic: You choose their own topic, in consultation with the supervisor whose research corresponds with the thesis topic.

#### *What makes a good thesis topic?*

A good thesis topic is a general idea that needs development, verification, or refutation. The thesis topic should be of interest to you, the supervisor, and the research community. It can be very helpful to choose a broad subject area at first. Through carefully reading and researching that subject area, you will gain an understanding of what it is that prior research has accomplished and consider ways your thesis might further develop the topic or might approach the topic from a totally different perspective. This helps you to narrow down toward a concrete, well-defined thesis topic.

### 2.2 Thesis agreement and plan of work

Once you have chosen a topic and have been assigned a supervisor by the thesis coordinator, the supervisor and you jointly draw up a thesis agreement. This is a written record of the mutual agreements between student and supervisor (see Appendix 1), including:

- The language in which the thesis should be written
- The number of credits assigned to the thesis
- The start date and the planned submission date of the thesis
- The number and frequency of supervision meetings
- The student's responsibilities within the thesis process
- The assessment time scale for the supervisor(s)

The thesis agreement also specifies the second reader, who is not involved in the creation process of the thesis. The first supervisor is always associated with the Language, Literature and Communication department of the Faculty of Humanities of the VU. The second reader can possibly come from outside the faculty but must always be affiliated with a university or university of applied sciences as a researcher and be approved as an examiner by the Examination Board.

In addition to individual MA-thesis supervision, the Language, Literature and Communication

department offers the option of paired (duo) supervision, and group supervision. In case of paired supervision, whether in an individual or group setting, there must be an independent second reader (in fact a third reader). The type of supervision is a joint decision between the student and the first supervisor and based on the thesis topic.

Appended to the thesis agreement, you draw up a thesis plan of work (see Appendix 2). The plan of work must at least include the planning of a sequence of activities and a timeline for these activities and is submitted to the supervisor(s) for approval. The second reader should also approve this plan of work in advance.

The purpose of the thesis agreement and plan of work is to offer the supervisor(s) and the student clarity about the nature of the supervision, to prevent students from falling behind with their studies unnecessarily and to provide solutions in the event of ambiguities and/or problems. The thesis agreement should be signed by the student and supervisor(s) and submitted (by the supervisor) to the Examination Board of the Master's programme for approval of the thesis.

### **2.3 Supervision meetings**

You are entitled to systematic supervision when producing your thesis. Your supervisor(s) and you discuss the nature of the supervision in advance. During the different phases, the supervision generally consists of the following elements:

- Advice on the choice of research topic, the conceptualization of theory and deriving the research question, the research design and on setting appropriate limits
- Approval of the above-mentioned issues
- Instructions regarding the rewriting of inadequate sections of the thesis

#### *Getting the most out of supervision interviews*

The frequency of the supervision meetings is stated in the plan of work. Each time, you deliver the agreed part of the thesis (e.g., the materials, the analysis) to the supervisor at the agreed period in time before the meeting (for example, two weeks before the meeting). This provides both the student and supervisor the opportunity to thoroughly prepare the meeting. Note that if you do not deliver, the scheduled supervision meeting will be cancelled. You are responsible for the agenda of the interview; formulate ahead of the interview the overall meeting objective, and the agenda topics, questions and challenges you want to discuss. The agenda forms a good common starting point and is also a useful tool to get through the most important points in the allocated time (maximum one hour). In addition to the agenda, you are responsible for taking notes; having notes gives you a better chance of effective recall. Also, your notes can serve as a written record of the meeting and help you with the preparation of the next supervision interview. By sharing your interview summary, including identified actions and next steps, afterwards with your supervisor, you assure mutual agreement and prevent potential misunderstandings or misinterpretations.

As a guideline, you have the right to a maximum of eight supervision interviews. According to the norms for teaching load, a supervisor can spend a total of 30 hours on supervising a Master's thesis, including all corrections. The supervisor provides feedback on drafted parts of the thesis twice at

most. If a concept version of the whole manuscript is still insufficient after feedback has been given once, the supervisor will record this, and it will form part of the final assessment. Note that the supervisor will not allow a manuscript to be sent to the second reader if s/he thinks the manuscript is insufficient. In case of the final version (the version sent to the second reader), the supervisor and the second reader only give feedback on this final version once. If the thesis is still unsatisfactory after this round of feedback, the assessors have no choice other than to fail the student for the thesis. You will then have to write a new thesis on another topic under the supervision of other lecturers.

If you fail the thesis, you need to start over again.

## **2.4 Assessment procedure**

The final version of the thesis is assessed by the supervisor(s) and the independent second reader with the help of the MA Thesis Assessment Form (see Appendix 3), which includes:

### Introduction

- Problem definition and relevance
- Treatment of academic literature
- Gearing approach to selected topic

### Method

- Research design and procedure

### Results

- Report and presentation of data

### Discussion and conclusion

- Critical reflection on the research performed
- Clarity of conclusions and recommendations

### Other aspects

- Writing skills
- Quality of argumentation
- Originality of the research
- Level of independence within the thesis process

The Thesis Assessment Form serves as a starting point for the assessment interview among the supervisor(s), the second reader, and the student – rather than a fixed scoring scale.

The final grade is the average of these two assessments. If two supervisors have been involved in the thesis, they first submit a joint assessment. The final grade is then the average of this joint assessment and the assessment of the second reader. The second reader assesses the final version within the time limit stated in the thesis contract.

If there is a difference of two points or more between the assessments, the case is referred to the Examination Board who will appoint a third assessor. The Examination Board is also called in if the difference between the assessment of the supervisor(s) and the second reader is one point, in cases where this makes the difference between a pass and a fail. In such cases too, the Examination Board will appoint a third assessor. The final grade will then represent the average of the three separate

assessments (assessment by the supervisor(s), by the second reader and by the third assessor). The Examination Board will communicate this final grade to you.

If you are unhappy about a certain situation, you should contact the supervisor at the earliest opportunity. If contact with the supervisor does not have the desired effect, you may contact the study advisor or study coordinator.

## 2.5 Submission procedure

The date on which the final version of the thesis is to be submitted to the supervisor(s) is stated in the thesis contract. The thesis contract also stipulates the amount of time that the supervisor(s) and second reader are given to read the thesis (between 1 July and 15 August lecturers are unavailable for correction work for at least four weeks).

If the final version of a thesis is submitted on 1 July, the assessment (pass or fail) must be made known no later than the last working day of August.

### *Presentation (not always mandatory, ask your supervisor)*

At a thesis colloquium or a special meeting organized by the department, you may be asked to give a presentation based on his/her thesis research, followed by a question and answer session. Depending on the guidelines specific to the various programmes, you may be asked to use PowerPoint and/or other audio-visual resources to illustrate the presentation.

### *Final assessment and evaluation*

The final assessment of the thesis will be communicated to you at a meeting with the supervisor(s) and if relevant the second reader, after which the content of the thesis will be discussed. The process leading to the production of the thesis is evaluated in a discussion between the supervisor(s) and you, including content, organizational aspects and supervision.

### *Archiving and graduation procedure*

You hand in a printed copy and a digital copy of the completed thesis to the supervisor(s). The final version of the Master's thesis, approved by the supervisor, must be uploaded by you via [www.ubvu.vu.nl/vunetid](http://www.ubvu.vu.nl/vunetid). When uploading the thesis, you will also be asked to indicate whether it may be viewed by others. As part of this process, you will also submit a short summary of the thesis for the digital archive.

## 2.6 Timeline

Since different projects have different trajectories, we cannot give a general timeline which 'fits' to all theses. But see the following overview for an example of the most important steps towards the submission of your master thesis (of which the dates may be different for different projects, please ask your supervisor about this):

Date	Output
Feb 1 <sup>st</sup>	Topic and supervisor selection
Feb 15 <sup>th</sup>	Thesis agreement and work of plan
March 1 <sup>st</sup>	Theoretical framework



April 1 <sup>st</sup>	Method
May 1 <sup>st</sup>	Results
June 1 <sup>st</sup>	Discussion and conclusion
July 1 <sup>st</sup>	Final version of thesis
August 1 <sup>st</sup>	Submission ( <i>if succeeded</i> )

### 3. Thesis Structure

For a quick overview of what information to include in your thesis, please consult the following cheat-sheets regarding APA journal standards:

For quantitative methods: <https://apastyle.apa.org/jars/quant-table-1.pdf>

For qualitative methods: <https://apastyle.apa.org/jars/qual-table-1.pdf>

For mixed methods: <https://apastyle.apa.org/jars/mixed-table-1.pdf> (and consult the files for the quantitative and qualitative parts of your study linked to above).

The remainder of this chapter discusses the structure of your thesis in relation to the grading sheet.

Your thesis consists of at least the following parts.

- Title page;
- Abstract;
- Declaration of Originality (see appendix);
- Table of Contents;
- Introduction;
- Theoretical Framework;
- Method;
- Results/analysis;
- Conclusion and discussion;
- References.

Below, we will discuss additional details considering the contents of each of these parts.

#### 3.1 Title Page

The title page should contain the following information: The title of your project, your name, your student number, your address, the name of your supervisor(s), date of submission (see Appendix 4)

#### 3.2 Abstract

- A good abstract explains in one line why the paper is important. It then goes on to give a summary of your major results. The final sentences explain the major implications of your work. A good abstract is concise and readable.
- Length should be ~ 1-2 paragraphs, approx. 400 words.
- Abstracts generally do not have citations.
- Information in the title should not be repeated.
- Be explicit.
- Use numbers where appropriate.
- Answers to these questions should be found in the abstract:
  - o What did you do?
  - o Why did you do it? What question were you trying to answer?
  - o How did you do it? State methods.
  - o What did you learn? State major results.
  - o Why does it matter? Point out at least one significant implication.

From: [https://www.ldeo.columbia.edu/~martins/sen\\_sem/thesis\\_org.html](https://www.ldeo.columbia.edu/~martins/sen_sem/thesis_org.html)

### 3.3 Declaration of Originality

In each thesis, the following statement must be included after the title page and before the table of contents and must be signed by hand.

*Ik verklaar hierbij dat deze scriptie een oorspronkelijk werkstuk is, dat uitsluitend door mij vervaardigd is. Als ik informatie en ideeën aan andere bronnen heb ontleend, heb ik hiervan expliciet melding gemaakt in de tekst en de noten.*

*(plaats, datum)*

*(handtekening)*

English version:

*I hereby declare that this thesis is an original piece of work, written by myself alone. Any information and ideas from other sources are acknowledged fully in the text and notes.*

*(place, date)*

*(signature)*

This declaration serves to prevent plagiarism. Of course, your thesis supervisor will assume that your work is honest and not the result of academic misconduct, and rightly so. But should there be a suspicion of academic misconduct, then the procedure is as follows:

- When the supervisor suspects the student of academic misconduct in the thesis, he/she arranges a meeting with the student and offers him/her a chance to explain.
- If the suspicion is confirmed or if there is still doubt regarding the circumstances after the meeting, the supervisor notifies the Examination Board of the events. In either case, the Examination Board takes over the procedure.
- The Examination Board questions the student and the supervisor regarding the circumstances of the case.
- If academic misconduct is proven, the student will at all events be issued with a new assignment and penalties may also be imposed.

### 3.4 Table of Contents

### 3.5 Introduction

Usually, you will write (the final version of) your introduction when the rest of your thesis is finished.

Your introduction has four main goals:

1. Show the reader how interesting your thesis topic is. It is almost always a good idea to include an appealing example of the phenomenon you are studying.
2. Explain to your reader what question you want to answer with your research. This is also called the **problem definition**. Make sure that your problem definition is concisely formulated and that the research question can be answered with several months of doing research. Of course, creating a concise problem definition and judging the viability of your research will be done under supervision of your thesis supervisor.

Very often your central or main **research question** is broken down into **sub-questions** or, alternatively, into hypotheses. Your sub-questions are narrower more focused questions that you need to answer before you can answer your main question.

Here is an example:

- Your main question can be: *“To what extent can watching TV daily negatively impact social behavior and how can these negative impacts be minimized?”*
- Examples of your sub-questions can be:  
*“What is known about the negative effects of watching TV daily?”*  
*“What are known strategies to minimize these effects?”*

3. Explain to your reader why you are studying this topic, that is: explain to your reader why you want to answer your research question, describe the **research goals**. This boils down to describing the broader context of your thesis. In practice, you do this by convincing your reader of the theoretical and practical relevance of your research. With respect to the theoretical relevance, you will show what and how your research contributes to current insights in the academic literature.
4. Provide an overview of the content and structure of the remainder of your thesis, a so-called advanced organizer. You will do this in the final paragraph of your introduction.

### 3.6 Theoretical framework

The introductory chapter provides an overview of what you have been researching and why that is important, the next chapter presents the theoretical framework of your study. Essentially, you will follow a line of reasoning to sustain all aspects of the research question.

Your theoretical framework should be aimed at the following:

- Provide conceptual clarity about the concepts in your research question and sub-questions. The idea is that you make certain that the reader fully understands what you are talking about. This includes defining all the concepts and explaining what your main theoretical assumptions are about how these concepts are related.

- The above entails that you describe scientific theories and empirical results related to your topic. Since the reader must be able to understand what you are researching, you will have to describe theory and empirical results fully, accurately, and comprehensibly.
- Your exposition of the research literature serves to provide a solid justification for your choice regarding how to approach answering the problem definition. This means that you provide sound reasoning for selecting a thesis that evaluates or tests a hypothesis, that explores a certain topic, or provides a review of the literature.

Your choice of how to approach the problem definition influences what you focus on in your theoretical framework:

### *Hypothesis testing*

If you test one or more hypotheses in your thesis, your theoretical framework must focus on providing arguments in support of the plausibility of each hypothesis. It helps if you consider each of your substantive hypotheses as a potential explanation for an observed phenomenon. Usually there are several explanations for a phenomenon, so it is your task to convince your reader that your explanation is the most reasonable one. You do that by showing that it is consistent with leading theories, preferably by showing that your hypothesis can be deduced from the theory, and that your hypothesis is more compatible with empirical data than any of the viable alternatives.

Remember that your reader needs to know the full story, so you should not ignore incompatible results, lest you be accused of cherry picking (So you need a balanced review of the empirical literature). Of course, if you cannot rule out reasonable alternatives, you might want to devise a study that collects observations that can be used to evaluate the reasonableness of the competing hypotheses, by focusing on testable implications of each of the hypotheses.

Note that there is an important conceptual difference between substantive hypothesis (a potential explanation), research hypothesis or testable hypothesis (a prediction about the actual outcome of your study) and statistical hypothesis (an assumption about a probability distribution of potential observations). Keeping the distinction clear prevents drawing incorrect conclusions with respect to your substantive hypothesis. Make sure that you and your supervisor are clear about what you mean with the term “hypothesis”. You can read more about the distinction in the Appendix, but for now it suffices to remember that statistical hypotheses, such as the null-hypothesis of a significance test, do not appear in your theoretical framework. Your framework contains reasons and arguments supporting substantive hypotheses.

### *Inductive research*

If your goal is exploration instead of hypothesis testing (or explanation), the focus of your theoretical framework is not so much that you provide argumentation in support of one or more substantive hypotheses. Indeed, the context of exploratory research is that there is little or no theory or empirical results that allow for the derivation of hypotheses. This does not mean that there is no argumentation. On the contrary, you will need to argue that the concepts you use to explore the phenomenon, the so-called “sensitizing concepts” are appropriate. Usually, you will illustrate the usefulness of these concepts by giving a preliminary description of the concepts and showing how they can be used in describing, organizing, and annotating the phenomenon under study.

### *Literature review or meta-analysis*

It is of course possible to systematically analyse the research literature in order to describe the state of the art regarding a certain phenomenon. This can be done via (narrative) literature review or meta-analysis (qualitative or quantitative). In all cases the theoretical framework of your thesis, must provide a clear description of the hypotheses or questions for which you would like to evaluate the extent to which they are supported or answered by the literature. Again, all concepts in these hypotheses must be clearly defined and accompanied by a preliminary description.

### *Dealing with the literature in your theoretical framework*

In constructing the argumentation in your theoretical framework, you will have to communicate recent insights, theories and empirical results regarding the topic of your thesis. Here are some tips of dealing with the literature.

- 1) Remember that you present your interpretation of the literature. You are the one doing the “talking” (writing), you are the one who is trying to “sell” a research idea and at the end of your theoretical framework your audience will be captive by your research idea(s). You will do this by explaining concepts and providing arguments. You will have assumptions and make statements throughout your theoretical framework and you need to justify these by empirical data you gathered yourself, good thinking, sound reasoning and by relying on the literature.

Of course, much of what you know about the phenomenon under study comes from the work of others, but that doesn’t mean that you can hide behind the “giants” on whose shoulders you are standing. You are responsible for every word in your theoretical framework. This means that you should make minimal use of the words of others. If you use someone else’s thoughts or results, paraphrase them, and include a reference to your source in the text and in the reference list. So, refrain from using phrases such as: “Johnson (2020) says that: ...” or “Petersen (2020) has stated that [...]”.

- 2) Make sure that your references are consistent with the APA-conventions. You can find all the relevant background information at the site: <https://apastyle.apa.org/>.
- 3) It is your responsibility to consult the primary literature. If and only if it is impossible to get access to the primary literature is it ok to refer to it using a secondary source. Thus, if you read in Johnson (2000) that Petersen (2002) has claimed something, you have to make sure that what Johnson (2000) writes about Petersen (2002) is indeed correct. If and only if you cannot get access to Petersen (2002), and you will have to explain to your supervisor why not, can you reference Petersen (2002) as follows: “Good references are important (Petersen, 2002, as cited in Johnson, 2000).”. In your reference list at the end of your thesis you only include Johnson (2000) and not Petersen (2002). See also: <https://apastyle.apa.org/style-grammar-guidelines/citations/secondary-sources>.

## **3.7 Method**

Your Method chapter describes (in past tense!) all the activities or “operations” you have performed in gathering and analysing your materials. You should strive for a level of detail that enables a knowledgeable and competent reader to repeat your research.

Your Methods chapter focuses on the details that are important for your research strategy (e.g. survey, experiment, case study, etc.; these details may differ between strategies). You will have to make sure that the chosen strategy fits the problem definition, in the sense that the research materials you gather using the strategy make it possible to answer your research question(s). This means that you show that there is a clear connection between the observations and/or

research materials and the way in which the theoretical constructs are defined or operationalized.

You need to make sure that all the aspects of your study that influence the reliability of the observations and/or the validity of the conclusions have been sufficiently addressed. Thus, make sure that you spend enough attention to issues such as sampling, experimental design, generalizability, triangulation, etc. Note that these issues are selectively applicable depending on the design of your research.

### **3.8 Results**

In your results chapter you provide a systematic overview of your analysis of the research materials / observations. Depending on the research tradition, you try to minimise the substantive conclusions in this chapters, by trying to let the analyses speak for themselves. In the conclusion /discussion chapter you will evaluate the meaning of your results in light of the substantive ideas developed in your theoretical framework. Note that all of the analysis you present in the results chapter are justified in your method chapter.

For general (journal) guidelines for the reporting of qualitative studies see:

<https://apastyle.apa.org/jars/qualitative>

For quantitative studies see: <https://apastyle.apa.org/jars/quantitative>

And for mixed methods studies: <https://apastyle.apa.org/jars/mixed-methods>

If you have used a quantitative research strategy, such as survey, experiment, or meta-analysis, you will use both descriptive and inferential statistics. It is almost always a good idea to use tables and figures to support or underline the substantive conclusions you draw on the basis of your descriptive and inferential analyses. As with references, your tables and figures need to be consistent with the guidelines of the APA publication manual. See the site:

<https://apastyle.apa.org/style-grammar-guidelines/tables-figures/>.

With respect to the inferential statistical analyses, the best reporting strategy, according to statisticians, methodologists and the APA publication manual is to report effect sizes and confidence intervals, if possible. (There are some statistical measures for which it is difficult to provide confidence intervals). A confidence interval provides an indication of the uncertainty of the effect size (i.e., uncertainty of the estimates of population parameters, such as differences between means, correlations, regression coefficients, standardized effect sizes such as eta-squared and Cohen's d, etc.), and a CI can be used for null-hypothesis significance testing: values contained in the interval would not have been rejected with a significance test using a 5% tolerance for the type I error rate; values outside the interval would have been rejected.

To do a standard significance test with a confidence interval, simply decide to reject the null-hypothesis value if the value is outside the interval and do not reject (but not accept) the null-hypothesis value if it is inside the interval. You should not accept the null-value because it is one of the many values that would not have been rejected. However, using the CI for null-hypothesis testing is not it's the most informative use. Rather use the CI as an expression of all potential population values consistent with your data.

The null-hypothesis value can be everything you like (as long as you can predict a specific value), but in conventional significance testing the null-value is virtually always zero (the null-hypothesis of a significance test is a so-called nil-hypothesis). Thus, standard significance tests such as the t-test, will test the statistical null-hypothesis that the population value of the effect

size you are interested in equals zero. Using a type I error tolerance of 5% you will reject the null-hypothesis if  $p < .05$  and you will not reject if  $p \geq .05$ .

A few things are important to note about inferential statistics:

- In this particular approach to statistical null-hypothesis testing, it is impossible to accept the null-hypothesis unless the type II error rate is known prior to the statistical test. In practice, the type II error rate is virtually never known, so in general you will not be able to accept the null-hypothesis, so you will have to say that you failed to reject it.
- If you use p-values or CIs to make a reject or not-reject decision, keep in mind that what you are deciding upon is to reject or not-reject the statistical null-hypothesis. If you reject the null-hypothesis you will accept the statistical non-null alternative. If you fail to reject, you cannot accept the null, for reasons stated above, so you can also not reject the statistical alternative hypothesis.
- Under no circumstance is a conventional significance test a test of a substantive hypothesis, so statistically speaking it makes no sense to reject your substantive hypothesis simply because a test of a statistical null-hypothesis is not significant. Non-rejection of a statistical null-hypothesis simply means that the null-value is one of the values consistent with your data. Other potential population values will also be consistent with your data, including values that are in line with your research hypothesis. A confidence interval will provide you with a concise description of all population values consistent with your data: these are the values between and including the confidence limits.
- A significant test result provides only very weak support for your non-statistical hypotheses (i.e. research or substantive). The reason is that you test a statistical null-hypothesis and not a non-statistical one. Rejection of the statistical null-hypothesis means that you are willing to accept that some population value is non-zero. Such a result is of course consistent with any non-statistical hypothesis that “predicts” that the population value should be non-zero. Example, suppose your substantive hypothesis is that there is a causal connection between attractiveness and persuasiveness: one speaker may be more persuasive than another because of differences in attractiveness. With some reasoning you can derive from that hypothesis that a sample of sensible measures of attractiveness and persuasiveness should show positive correlation. Your best friend claims that it is the other way around: speakers may be found more attractive because they are more persuasive. From your perspective this reversal of causality seems extremely silly. With some reasoning, we can again derive the testable hypothesis that we should find a positive correlation between measures of persuasiveness and attractiveness.

Suppose you find a positive correlation and a test result that is significant. So, you reject the null-hypothesis that the population correlation is zero or negative and you accept that the population correlation is positive. Now you can easily see those facts alone provide little support for your substantive hypothesis, since the hypothesis of your friend who hypothesizes the exact opposite is also consistent with the results and the statistical test. The point here is not that you should have done a better study (which you should have) but that if a significant test result provides any support for a substantive one at all, it provides support for all those substantive hypotheses from which a non-nil statistical hypothesis can be derived, even non-sensical ones. This means that even though you found a result in line with your hypothesis, you will have to argue in your theoretical framework or in your conclusion/discussion why your substantive hypothesis beats all sensible alternative substantive hypotheses.



- Make a distinction between what you actually found in your research and the results of an inferential technique. If your sample results are in line with your hypothesis, a sensible conclusion is that the obtained results are as expected. If the inferential techniques show large uncertainty or a not-significant effect, it is not that your results are not as hypothesized, but it is uncertain what your results have to say about the target population. It would be silly to conclude that your results do not support your hypothesis if what you find is exactly as expected. It is good practice to first assess what the descriptive statistics seem to tell you about your substantive ideas. The story your data tell you can subsequently be qualified using the results of inferential statistics.
- Beware of faulty interpretations of significance tests and confidence intervals. This includes the following interpretations:
  - The result is significant so the results are not due to chance.
  - The result is significant so the results are likely to replicate.
  - The result is not-significant so there is no effect in the population.
  - There is a 95% probability that the CI just calculated includes the unknown population value.
  - The result is significant so the result must be important.

### 3.9 Discussion and Conclusion

The final chapter in your thesis presents a discussion of your conclusions and your conclusions in the context of the literature you reviewed in your theoretical framework. (There is also an option to have separate chapters for discussion and conclusion).

This final chapter serves the following goals:

You explicitly answer your problem definition (your research question and sub-questions). This means that you will interpret the meaning of your results in light of your problem definition. For example, here you will have to conclude what the results of your analyses provide support for your substantive ideas. For instance, what do you think your statistical results have to say about the plausibility of your substantive hypothesis?

You describe what your research specifically contributes to the research literature reviewed in your theoretical framework. It may help if you ask yourself the question: "What do I know now about the thesis topic, compared to what I knew before I did the study?" This is one way of showing the importance of your research in a broader context. Another way is to elaborate on the potential practical implications of your work.

Explain the implications of your conclusions for further theory development.

If there are any relevant theoretical alternative explanations, this would be the place to discuss them.

Describe interesting directions for further research. Your research does not only answer your research questions, but it will lead to many interesting follow-up questions.

Make sure that you are aware that all conclusions based on a single study are tentative. A single study seldomly settles a theoretical issue, not even a minor one. So, spend some words on a critical evaluation of your research method, but without being overly critical of it. Describe a few reasonable alternative explanations for your result that have to do with the specific way your research was done. Reasonable means that you have good arguments why a methodological choice may have brought out the results in a biased way. It is not enough, for example, to say

something like with other participants the results may have been different. You will have to come up with arguments in what specific way the particular participants have a systematic effect on your observations.

### **3.10 References**

Your reference list contains all of the sources you cited in your thesis, whether in your theoretical framework, method, results, or discussion. The goal of this list is to make it easier for your reader to identify and retrieve all sources in your text.

Your reference list is formatted according to the APA 7 publication manual. You can find all the relevant details here: <https://apastyle.apa.org/style-grammar-guidelines/references>.

### **3.11 Appendices (optional)**

In the appendix or appendices you could include your data, or some more information on your data, such as questionnaires, transcripts, et cetera. Also, if you feel that some information on your research should be provided which is not suitable to be used in the main text of your thesis, you could include it in the appendix. Think of, for instance, elaborate background information on the context of your research.

## **Appendices**

1. Thesis agreement
2. Plan of work (appended to thesis agreement)
3. Thesis assessment form
4. Example of title page
5. A note on hypothesis testing

## Appendix 1: Example of Master's thesis agreement (optional: two supervisors)

Student: .....

Address: .....

Postcode/Town or city: .....

Tel. no.: .....

Degree programme: ..... student number.....

Supervisor 1: .....

(Name and Chair) .....

Supervisor 2: .....

(Name and Chair) .....

Third reader: .....

(Name and Chair) .....

Description of topic: .....

.....

Language of final version: .....

Contribution by Supervisor 1: .....

.....

Contribution by Supervisor 2: .....

.....

Number of credits: ..... Teaching load for Supervisor 1 .....

Teaching load for Supervisor 2 .....

Start date: ..... end date: .....

Submission date for plan of work.....

Minimum and maximum number of supervision interviews with Supervisor 1 ...../.....

with Supervisor 2 ...../.....

At least once every ..... weeks, a joint meeting with both supervisors will take place.

Assessment timescale for supervisors: .....

Assessment timescale for third reader: .....

Additional agreements: .....

.....

Signed for agreement:

Place and date .....

.....	.....	.....	.....	.....
signature of	signature of	signature of	signature of	signed on behalf of
student	Supervisor 1	Supervisor 2	third reader	Examination Board
				for receipt
				and approval

## Appendix 2: Example of plan of work (appended to thesis contract)

Name of student .....

Degree programme ..... student number .....

Name of supervisor(s)/ .....

Chair .....

Second reader/  
Chair .....

Working title .....

Topic .....

.....

Aim and relevance .....

.....

Problem definition .....

.....

.....

Data-collection/  
research method .....

.....

.....

Provisional organization of chapters .....

.....

.....

.....

.....

Provisional  
book list  
(appendix)

Timetable

- start date .....
- orientation phase .....
- execution phase .....

(submission dates for chapters) .....

.....

- completion phase .....
- planned thesis presentation date .....
- planned graduation date .....

Remarks .....

### Appendix 3: Examples of assessment forms for Master's thesis

Name of student: .....

Student number: .....

Supervisor(s): ..... and .....

2nd reader: .....

criteria	description	assessment: fail – pass – good – very good	explanatory notes
Structure and design	internal coherence; formulation of topic/research question, objective, chosen research method, findings		
Explanation of analysis	how did you obtain your research data and what did you do with them?		
Aim and relevance of topic	theoretical basis, identifiable and verifiable use of literature and empirical sources		
Originality of research	in terms of defining the topic/research question, research method, findings		
Use and analysis of sources and data	relevance of choice, description where applicable, findings		
Use of existing secondary literature	selection, documentation, analysis		
Argumentation	internal logic of the argument, distinguishing between empirically founded statements and opinions, assumptions and prejudices		
Language use	correct, clear, academic use of language in accordance with the conventions of the genre; coherence, style		
Preparation and writing	effort, duration, independence, personal contribution, number of revisions, scope		
In order to obtain a pass for the thesis, all these points need to be assessed as satisfactory.			

Final grade:

Summary of the thesis assessment and/or explanation of the final grade  
(If not apparent from the assessment of each component)

## Appendix 4 Example of title page

# Physical appeal in advertisements

### **Charlotte Boon**

Roulettestraat 88  
1020 AJ Amsterdam  
Tel.: 020 - 58593739  
Student number: XXXX  
E-mail address: c.boon@let.vu.nl

First supervisor: Prof. P.  
Jansen  
Second supervisor: Dr E.  
Jansen  
Second reader: Dr S. De Jong

June 2010

VU University Amsterdam  
Faculty of Arts  
Master's programme in CIW

## Appendix 5 – A note on hypothesis testing

Hypothesis testing: substantive, testable and statistical hypotheses.

Example: You hypothesize that the persuasiveness of a speaker depends on the attractiveness of the speaker. You can see this hypothesis as a potential explanation for differences in persuasiveness between speakers: one of the speakers is more attractive and therefore more persuasive. Your literature review focuses on the extent to which the substantive hypothesis is compatible with leading theories of persuasive communication and with empirical findings reported in the literature. These empirical findings suggest conditions under which the attractiveness of the speaker influences persuasiveness and when it does not.

Since the substantive hypothesis is formulated in unobservable theoretical conceptual terms (so called constructs) it is not yet testable. In order to make it testable you need to operationalize it, part of which consist of you “translating” the constructs into variables that are observed and/or manipulated. (The full operationalization refers to everything you do from data collection to data-analysis; this is what you describe in your Method chapter).

Suppose you decide to use 7-point scales to assess how participants judge the attractiveness and persuasiveness of a number of speakers. If we now assume that your instrument is valid, it should be the case that if persuasiveness depends on attractiveness, you will find a statistical association between the attractiveness scores and the persuasiveness scores you obtained for each speaker. Furthermore, since you suppose that the more attractive the speaker is, the more persuasive, you reason that any reasonable measure of the statistical association between attractiveness and persuasiveness will have a positive value. So, the testable hypothesis for your research is that your data will show a positive statistical association between the attractiveness scores and persuasiveness scores.

It should be clear that your testable hypothesis is not a substantive hypothesis, but it is also not a statistical one. A statistical hypothesis is an assumption about a probability distribution or elements of a probability distribution called parameters. Very often (but not always) the parameter is the average value of your measure in a huge, possibly infinite number of repetitions of the same operationalization.

In our example each repetition consists of measuring the statistical association in a new random sample of participants who will judge the attractiveness and persuasiveness of our speakers on the respective 7-point scales. Let’s call the measure of association you use  $r$  and let’s call the average of this measure over the huge number of replications  $\rho$ . Examples of statistical hypotheses are that  $\rho \leq 0$ ,  $\rho = 0$ ,  $.10 < \rho < .60$ ,  $\rho > 0$ , etc. As you can see, these statistical hypotheses are simply assumptions about the value of  $\rho$ .

It is important to realize that your statistical hypotheses play no role in your theoretical framework. They may play a role in your results section, for instance if you want to test



a statistical null-hypothesis about a parameter such as  $\rho$  or if you want to estimate plausible values of a parameter (see section 3.8 for more information).