VRIJE UNIVERSITEIT AMSTERDAM

Faculteit der Geestes-wetenschappen

Programme in Communication and Information Studies

MA THESIS GUIDE

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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 13,000 and 17,000 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 assessor, 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 assessor 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 assessor (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 assessor 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 to the supervisor the agreed-upon part of the thesis (e.g., the materials, the analysis) at the agreed-upon time before the meeting (for example, two weeks before the meeting). This provides both the student and supervisor the opportunity to thoroughly prepare. Note that if you do not deliver, the scheduled supervision meeting may 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. 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 assessor if s/he thinks the manuscript is insufficient. In case of the final version (the version sent to the second assessor), the supervisor and the second assessor 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 assessor with the help of the MA Thesis Assessment Form (see Appendix 3), which includes:

<u>Introduction</u>

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

<u>Method</u>

- 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 assessor, 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 assessor. The second assessor 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 assessor 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 assessor 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 assessor are given to read the thesis (between 1 July and 15 August, many 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 assessor, 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.

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):

When	**What**
Period 4	Prepare thesis research proposal (the workplan)
First Monday of Period 5	Deadline thesis workplan and thesis contract
Period 5	Thesis research and writing
End of Period 6	Deadline thesis manuscript
Mid-July	Supervisor and 2nd assessor submit grades on OnStage
15 August	Deadline for revised thesis (if applicable)
31 August	Supervisor and 2nd assessor submit resit grades on Onstage

2.7 Academic dishonesty

Should there be a suspicion of academic misconduct, then the procedure is as follows:

1. 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.

2. 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.
3. The Examination Board questions the student and the supervisor regarding the circumstances of the case.
4. If academic misconduct is proven, the student will at all events be issued with a new assignment and penalties may also be imposed.

Chapter 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
- 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:
    - What did you do?
    - Why did you do it?
    - What question were you trying to answer?
    - How did you do it? State methods.
    - What did you learn? State major results.
    - Why does it matter? Point out at least one significant implication.

From: https://www.ldeo.columbia.edu/~martins/sen_sem/thesis_org.html

3.3 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.
3. 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:
    a. Your main question can be: “To what extent can watching TV daily negatively impact social behavior and how can these negative impacts be minimized?”
    b. Examples of your sub-questions can be: “What is known about the negative effects of watching TV daily?” and “What are known strategies to minimize these effects?”
4. 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.

5. Provide an overview of the content and structure of the remainder of your thesis, a socalled advanced organizer. You will do this in the final paragraph of your introduction.

3.4 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 subquestions. 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 <u>your</u> 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.

3.5 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.

3.6 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 etasquared 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 nullhypothesis value if the value is outside the interval and do not reject (but not accept) the nullhypothesis 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 nullhypothesis 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 nilhypothesis 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. Nonrejection 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 nullhypothesis 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. o 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. o The result is significant so the result must be important.

3.7 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.

3.8 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.

3.9 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 information	
Student name	
Student number	
Student address	
Student telephone	
Degree programme	
Number of credits	18 EC
Supervision	
Supervisor name	
Supervisor chair	
Supervisor contribution	Guidance, reading drafts, feedback, and evaluation as described in the Thesis Manual
Supervisor teaching load	30 hours
Minimum and maximum supervision meetings	4-8
Supervision frequency	Every two weeks or as agreed upon
Second assessor name	
Second assessor chair	
Third assessor name	
Third assessor chair	
Assessment timescale for supervisor and second assessor	10 working days
Thesis information	
Description of topic	
Language of final version	English / Dutch
Start and end dates	
Deadline for plan of work	
Deadline for final thesis	
Additional agreements	

Signed for agreement

Place and date .....

.....	.....	.....	.....
signature of student	signature of Supervisor	signature of Second assessor	signature of Third assessor

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

Name of student	
Student number	
Degree programme	
Supervisor name(s)	
Supervisor chair(s)	
Second assessor name	
Second assessor chair	
Workplan	
Working title	
Topic	
Aim and relevance	
Problem definition	
Data collection	
Research method	
Provisional chapter organization	
Provisional reading list	
Timetable	
Start date	
Contract and workplan deadline	
Draft version deadline	
Final manuscript deadline	
Graduation date	
Evaluation	
Supervisor evaluation	GO / GO WITH CRITICAL COMMENTS / NO GO
Supervisor remarks	
Second assessor evaluation	GO / GO WITH CRITICAL COMMENTS / NO GO
Second assessor remarks	

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

1. Introduction and theory					
1A. Problem definition and relevance	Fail	Pass	Good	Excellent	Explanation (if necessary)
The thesis is embedded in a broader context. The writer describes how the thesis is intended to supplement insights from the academic literature.					
The theoretical and practical relevance of the thesis is clearly stated.					
The problem definition is clearly and concisely formulated as a question without a trivial answer, and which can be answered on the basis of several months of research.					
1B. Treatment of academic literature	Fail	Pass	Good	Excellent	Explanation (if necessary)
Scientific theories and research findings about the thesis topic are stated fully, accurately and comprehensibly					
The discussion of the literature leads to the student's choice of a research approach / research model / hypotheses in order to answer the problem definition.					
Key concepts are thoroughly and those definitions are consistently maintained.					
1C. Gearing approach to selected topic	Fail	Pass	Good	Excellent	Explanation (if necessary)
For a thesis that tests a hypothesis: the hypotheses follow from the literature discussed and are precisely formulated. Together they provide a possible answer to the problem definition. For an exploratory thesis: the concepts contained in or derived from the research questions follow from the literature discussed. The exploration of these concepts in the data collection is motivated. For a literature survey or meta-analysis: the hypotheses to be confirmed (or the research questions to be answered) in the various studies are formulated precisely. The concepts contained therein are accompanied by a preliminary description.					
There is sound reasoning for selecting a thesis that tests a hypothesis, an exploratory thesis or a literature survey.					
2. Method	Fail	Pass	Good	Excellent	Explanation (if necessary)

The various aspects of the research design (survey, content analysis, case studies, experiment, etc.) are identified. The choice of study / data collection / research materials is consistent with the problem definition.					
The operationalization / detailed description of the theoretical concepts is sufficient to make the connection with the research material.					
Aspects relating to research (reliability, validity, sampling, non-response, choosing multivariate analysis, generalizability, type of triangulation, etc.) receive the necessary attention					
3. Results	Fail	Pass	Good	Excellent	Explanation (if necessary)
A readable description of the research material based on the defined / operationalized concepts is provided.					
The research method used to address the problem definition is applied adequately from a research viewpoint					
The results are described systematically, where possible in explanations accompanying tables and figures presenting the results. In a thesis that tests a hypothesis, it should become clear whether the hypothesis can be accepted. In an exploratory thesis, it should become clear how provisional ideas (sensitizing concepts) are defined more clearly. In a literature survey, it should become clear what the final verdict is on the central hypotheses stated in the studies examined.					
4. Discussion and conclusion	Fail	Pass	Good	Excellent	Explanation (if necessary)
The problem definition is answered explicitly; conclusions are drawn on the basis of the results and they expand on the academic literature already available.					
The implications of the research results for further theoretical development are formulated.					
Critical reflection takes place on the research methods used and the shortcomings of the study; possible avenues of further research are indicated.					

The significance of the research is placed in a broader context; where possible applications are touched on or recommendations given.					
5. Other aspects	Fail	Pass	Good	Excellent	Explanation (if necessary)
A clear distinction is made between the writer's own observations and opinions, and the observations, assumptions and visions of others.					
The use of language is impeccable (spelling, grammar). The writing style is clear (objectifying and systematic yet comprehensible and vivid).					
The structure of the thesis is clear, the problem definition and sub-questions serve a structural purpose for the argument. The thesis is of an appropriate length; any deviation from the guideline (between 13,000 and 17,000 words) must be justified.					
The literature references, tables, figures and chapter structure are in compliance with a standard format (usually APA, but in some cases a different format may be adopted).					
Originality					
6. Aspects to be assessed by the supervisor(s)	Fail	Pass	Good	Excellent	Explanation (if necessary)
The thesis was written with a high degree of academic self-motivation within the specified time; the comments of the supervisor have been promptly and properly incorporated.					

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

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Student number: XXXX
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VU University Amsterdam
Faculty of Arts
Master's programme in CIW

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

June 2010

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 <= 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.