

MSC Psychology, Neuroscience and Human Sciences

Thesis Guidelines

A student guide for Final Thesis and Graduation



UNIVERSITÀ DI PAVIA
**Department of Brain
and Behavioral Sciences**

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Where and When to start

Choosing Your Thesis

The thesis project can take up to a year to be done so near the end of your first year you should individuate a type of thesis and a project to work on. Contact a professor who does research in the field you are interested in to ask them to be your Supervisor.

Two types of thesis:

EXPERIMENTAL

- The structure of the various parts follows a precise reference scheme (e.g. introduction, method, results, etc.) similar to the structure of a Scientific article. A research is conducted by means of quantitative or qualitative tests, performed according to scientific methods with the use of analysis software
- The choice of the topic is followed by a bibliographic search and the formulation of a project with an experimental design
- Emphasis is on empirical research
- It provides for the explanation of: methodology, study participants, sampling, tools used, data analysis performed, discussion of the results
- It is placed within and contributes to the research activities carried out in the department
- The analysis of the reference literature serves to introduce the problem addressed, the methods used and the results obtained
- The studies shown in the bibliographic part are used in the discussion of the results to confirm or not the initial hypotheses, critically comparing them with the results achieved

THEORIC

- Bibliographic research can be carried out anywhere and at any time
- It highlights the critical points of the literature on a specific topic of interest, trying to suggest possible future developments. It is NOT a set of summaries!
- Review of the literature through the collection or synthesis of scientific works conducted on a specific aspect of the chosen theme
- Reworking of the content of the texts
- Summary of the lines of development of psychological research conducted on the subject
- Identification of strengths and weaknesses
- Presentation of a personal comment containing future research prospects aimed at filling any gaps highlighted
- From general to particular: it starts with a general introduction on the subject and then continues with specifying the particular problem that you intend to investigate
- Link the studies together (also proceeding in chronological order), using expressions such as "to overcome this inconvenience, other authors .." or "in the following years a series of authors have explored the subject in depth. Eg.."
- There must be a clear reason for deciding to go deeper into one study than the others
- Organize the material, dividing the contents

The fundamental evaluation criteria for a thesis

- autonomy of work of the candidate
- originality of the documentary and / or theoretical contribution
- exhaustiveness and systematicity of the bibliographic research carried out



- logical-lexical skills shown in the paper
- correctness and richness of the bibliographic references cited
- the adequacy of the research facility
- the adequacy of data analysis
- autonomy in the work performed
- logical-lexical skills



Bibliographical Search

- Identify the "right" keywords to be included in electronic search engines (specific)
- Use the keywords you find in the main scientific articles selected and / or suggested by the speaker
- Identify the main authors and search the database by author

OR

- Search for reviews, meta-analyzes, journal articles published in recent years and, by scanning their bibliography, find other reference articles
- Identify which are the main journals that analyze the topic and search the summary of their materials in the last 5 years

Revision of Literature

Why privilege scientific articles?

- More up-to-date, complete and varied information
- Different points of view on the same topic
- Practicality of using texts
- Sources of inspiration and reflection

The scientific articles are contained in numerous data archives, called DATABASES which can be accessed via the WIFI connections of the University of Pavia or from home thanks to the activation of the UNIPV Proxy.

How To

Unipv > Ateneo > Libraries > Resources > Databases

Which resources to prefer - Quali Utilizzare (BELOW)

How to select articles - Come Scegliere gli articoli (BELOW)

BANCHE DATI UNIVERSITA'

Attivato il proxy, è possibile avere **gratuitamente** accesso a una buona parte di articoli.

Come accedere alle banche dati?

- Sito UNIPV – Ateneo – Biblioteche



- Risorse – Banche Dati



Quali utilizzare?

- Psycinfo
- PubMed
- Scopus
- Science

Direct

Devono essere citate. Meglio usare più motori diversi!

Come scegliere gli articoli?

- Numero di citazioni
- Lingua Inglese
- Autori
- Anno pubblicazione
- Accessibilità
- Key words



HOW TO manage your references:

- Mendeley
- Endnote
- Zotero
- Google Drive

Writing your Thesis

General Rules for a good thesis

For each sentence ask yourself:

Is it essential or at least useful?

Is it clear or can it be formulated better?

Has it been placed correctly or is it better to anticipate or postpone it?

For each word ask yourself:

Is there a more appropriate, accurate or not yet used expression to express that concept, avoiding repetitions?

Start with a draft of the index, that is, from the **organization** of the material.

The shorter the part you have to write, the easier it will be to write it ...

Break down each part into sub-parts!

- Length: about 100 sides (excluding any attachments or appendices)
- Font: Times New Roman or Arial; body: 12
- Line spacing: 1.5 or 2
- Margin: 2.5 or 3
- If this is the first time you have used an acronym, report it in full by introducing the acronym in parentheses. For the following times, give only the acronym

Title

At the beginning of the drafting it is important to have a rough title even if it will be changed later: the title often becomes definitive at the **END OF THE THESIS**

It is necessary to understand the subject of the paper in one sentence because the title is **SHORT**

In the event that the work carried out is divided into several passages, these must be summarized in the title

If you are afraid that it does not make clear the topic you are dealing with, you can always put an explanatory subtitle

FrontPage

University logo and name

Name of the department of reference of the degree course and degree course

Thesis title (with possible subtitle)

Name and surname of the speaker

Name and surname of the co-supervisor

Name, surname and registration number of the student

Academic year

Index

It includes the start page and the titles of all chapters with their page number

It establishes what will be the logical subdivision of the thesis into chapters, paragraphs and sub-paragraphs

It helps to keep the thread of the conversation and to proceed with continuity without getting lost in digressions

Clear and schematic: it must highlight the logic behind the exposition

It doesn't have to be long - just create the chapters you need

Experimental Thesis like an Academic Paper

1. Index
2. Abstract
3. Introduction & Background
4. Research hypothesis
5. Method
6. Results
7. Discussion
8. Conclusion
9. Bibliography
10. Appendices

Abstract

Short: between 150 and 300 words

Significant: whoever reads it must understand what the thesis is about, why it analyzes that issue and what conclusions it reaches

Including the key words of the thesis

Method - Objective - Conclusion - Keywords

Health Psychology: Salmonellosis Prevention	
<p>Salmonellosis is one of the most common foodborne human diseases. The risk of infection can be reduced by communication campaign. The target audience was university students. They were presented with one of three messages, a cognitive message, an affective message or a control message. The cognitive message stressed the ravages of eating raw meat on mental activity, while the affective message underlined adverse effects on emotionality and motivation. The aim of this study was to demonstrate the efficacy of a food safety message that highlights that eating well-cooked meat is an effective strategy for preventing salmonellosis. The cognitive message proved to be very effective. It changed the implicit and explicit attitude toward raw or rare meat. After having read the cognitive message, the well-done meat was evaluated more positively, while the raw or rare meat was evaluated more negatively and it was distanced from self-image. Finally, intentions to eat raw or rare meat were weaker in those who read the cognitive message compared with those who read the control message.</p> <p>Key words: prevention, persuasive messages, implicit and explicit attitude</p>	<div style="border: 1px solid green; padding: 2px; margin-bottom: 10px; width: fit-content;">metodo</div> <div style="border: 1px solid yellow; padding: 2px; margin-bottom: 10px; width: fit-content;">obiettivo</div> <div style="border: 1px solid purple; padding: 2px; margin-bottom: 10px; width: fit-content;">conclusioni</div> <div style="border: 1px solid red; padding: 2px; width: fit-content;">Key words</div>

Introduction

It must present the work clearly and succinctly, justifying its existence

- Introduction: general introduction on the selected topic, trying to highlight why it is relevant (1-2 sentences)

- Literature: theoretical background of reference
- Identifying a "niche": a gap to be filled
- Occupy the "niche": explain what the objectives of your work are, what question and need it intends to answer
- Briefly describe the articulation of the thesis (verbs in the future)
- Anticipate the most significant results obtained
- It is generally written at the end of the work when it is possible to have a global vision of one's path: 2-4 pages

Theoretical Chapters

First Chapter

Dedicated to defining the state of the art of the subject examined

From this framework, the lines of interpretation that justify and require in-depth analysis must emerge

Subsequent chapters (one or two)

Focus on the research topic

It presents in depth the salient issues and the theoretical aspects of reference

IT IS ALWAYS NECESSARY TO MENTION THE SOURCE OF WHAT YOU AFFIRM!

NB. In the case of a bibliographic thesis, the following chapters are also continued with the critical argumentation of the works in the literature.

Research Hypothesis

From literature... To search

WHAT IS EXPECTED AND WHY

After reviewing the literature on the subject, it is necessary to identify the unresolved issues found in recent studies published on the subject (in the articles, focus on the suggested future perspectives!) and select from these one or more problems to formulate one or more research hypotheses.

Hypothesis Example

In sum, the hypothesis of ToM as a two-component process, self-perspective inhibition and belief reasoning was tested. Based upon the lesion studies conducted by Samson et al. (2004, 2005), we specifically expected that self-perspective inhibition would be mediated by the IFG, whereas belief reasoning would be mediated by the TPJ, extending to the STG. Furthermore, we expected overlapping activations in the bilateral IFG in response inhibition and self-perspective inhibition.

Methods

Participants

- Sample size
- Socio-demographic variables
- Methods of recruitment
- If applicable, compensation received

In order for the research to acquire an excellent value, it is essential that there is either a large sample or numerous variables investigated.

Procedure

- Order of presentation of evidence
- How the participants were distributed in the presentation conditions
- How the instructions were given
- Specific procedures (therapies / training)
- Place and duration of the test
- Consent and ethical aspects
- Technical data (e.g. fMRI)
- Statistical analysis carried out

Tools

- Description of the questionnaire: cite the source (original and Italian version), the construct investigated, the number of items, the sub-dimensions analyzed, briefly describing them and reporting an example and Likert scale of response and / or range of scores
- Type of stimuli used, how many
- How they were built and presented
- Dependent / independent variables

Example

General Health Questionnaire (Goldberg and Williams, 1972) made it possible to investigate the perception of one's psycho-physical state of health. This tool is composed of 12 items, divided into 3 sub-scales that evaluate the following symptoms: general dysphoria, includes items related to the presence of psycho-social symptoms (eg "Have you lost a lot of sleep due to worries?"); social dysfunction, refers to difficulties in social functioning and problem management (eg "Did you feel capable of making decisions?"); loss of confidence, refers to a lack of self-esteem and self-confidence (eg "Did you think you were a worthless person?"). Items are rated on a Likert scale (0 = more than usual / no; 3 = much less than usual).

Coding The Answers/Data

The answers of the open questions are grouped into categories, to which a number is assigned, while the "closed" answers of the questionnaires remain unchanged.

Analysis of Data

Description of statistical analyzes performed (e.g. descriptive, correlations, ANOVA / t-test)
Follow the logical order in which the analyzes are carried out

Results

- Description of the analyzes conducted (descriptive statistics, ANOVA, correlations)
- Expose the results of these analyzes, reporting the statistics in the text
- To simplify the understanding of the results, you can use graphs (histograms, pies, etc.) and / or tables that are accompanied by a comment on the content shown and the aspects to be highlighted (without going into the details of obvious or evident)
- No considerations are made on the results obtained, an interpretation is not provided at this point

Stats

- Descriptive statistics: report the mean together with the standard deviation of the mean "Research participants were mostly in their twenties (M = 20.2, SD = 2.9)"
- Statistical tests: report the name of the test (in italics), the value of the statistic, the degrees of freedom and the probability value associated with that particular statistic value (p in italics)

Test Types

- **ANOVA** "The duration factor of the sound was significant: $F(1, 149) = 10.83, p < 0.5$ "
- **T-test** «Males were on average taller than females: $t(99) = 10.45, p > 0.5$
- **Correlation** "The correlation between weight and height of the participants was not significant: $r(99) = .13, p > 0.5$ ", or, alternatively, " $r(99) = .13, n.s.$ "
- **Regression** "The linear regression adapted well to the experimental data: $r^2 = .991, F(1.5) = 567.30, p < .001 (B = 1.59)$ "
- **Chi-square** "The answers were not randomly distributed: $\chi^2(3) = 10.1, p < .05$ "

Graphs and Tables

They are used to summarize in a small space and in a CLEAR and IMMEDIATE way a whole series of data that otherwise would require a long and boring description in the text.

How To

Each type of information has one or more suitable graphics. Avoid inserting too many tables and graphs if they are useless or the corresponding table and graph together: decide which is the most effective. Avoid inserting data already shown in the table in the text. They must ALWAYS be accompanied by a CAPTION that briefly describes what the figure represents and by a short but exhaustive TITLE, sometimes, by NOTES.

Text in Graphs

- Feedback in the text: it is necessary to refer to it in the text of the thesis and always comment on the content and the aspects you intend to highlight
- The reference must be accompanied by a distinct progressive number for graphs and tables

Example

"Table 16 shows the average values obtained for each item of the GHQ-12 questionnaire (General Health Questionnaire), while in Graph 15 the average values detected for each of the scales of the questionnaire (general dysphoria, social dysfunction and loss of confidence) are represented. The results show scores below the central point of the response scale in all items and in all three factors, indicating the presence of good psycho-physical health."

Discussion

The considerations on the results and the implications deriving from them are discussed.

- Resume goals and assumptions
- Interpret the data obtained in the light of the objectives and hypotheses initially postulated
- Compare your results with the researches that are most closely related to your thesis: the research cited must be present in the introduction
- Contextualize your results against industry searches
- Report the strengths and weaknesses of the study
- Consider the implications for theory (and possibly practice)



- Enter suggestions for future research

Example

“Previous research has documented that emotional dissonance is an important strain in call centre work that has an impact on work motivation and well-being of agents beyond other typical problems such as time pressure or low autonomy. **Therefore, the first purpose of the present study was to generate more information regarding potential correlates of this phenomenon. With respect to this aim, the results of this study contribute to the literature in at least two ways. First, and in line with recent studies** investigating strain in call centres (Grebner et al., 2003; Grandey et al., 2004), **we found that inter-individual differences in negative and positive affectivity of agents are related to emotional dissonance at work. As several reliable correlations between emotional dissonance on the one hand and PA, NA, health disorders, and burnout on the other hand were found in this study, the impact of these dispositions on strain in call centre work definitely warrants greater attention in future work. Second, our results support and extend recent work on customer-related stressors. (...) Nevertheless, as the correlations between aggressive customers and the three burnout components in the present study are similar to the ones found by Dormann and Zapf (2004), it can be concluded that verbally aggressive customers are indeed a potential source of emotional dissonance and burnout in call centre work, too. Taken together, these findings are largely consistent with our current knowledge. However, our results also yield new and perhaps more controversial insights that, in our view, deserve attention for both practice and theory.”**

Conclusion

What should be put in the conclusion:

- It must "sum up" your research, summarizing the main results achieved, the thesis supported, the arguments reported (verbs in the past tense)
- It reflects the introduction: what was proposed in the introduction must be taken up again (objectives, contents chap.)
- Frame how the research presented, based on the results obtained, fits with respect to the objectives initially set and to the literature present
- It points out the limitations of the thesis and suggests indications for potential future developments

What should NOT be put in the conclusion:

- Results or information not discussed in the thesis
- Bibliographical references (these are **your** conclusions)

Tip

read the introduction and conclusion side by side to check their consistency

Bibliography

The bibliography illustrates the set of sources used for carrying out the work and for analyzing the collected data. It is mandatory: you have to be consistent! For each source cited in the text, the corresponding entry in the bibliography must be present. Each source cited in the bibliography must appear in the text of the thesis itself (at least once).

The bibliography contains all the bibliographic items cited, listed in alphabetical order, always placing the surname (s), initial (s) first, followed by publication date and title. In the case of a magazine, they follow: name of the magazine, volume number, page numbers Eg Bartlett, J., Domene, J. F. (2015). The vocational goals and career development of criminally involved youth: experiences that help and hinder. *Journal of Career Development*, 42, pp. 229-243.

In the case of a book or a volume, they follow: place of publication (city, state), name of the publisher Eg Boring, E. G. (1950). *A history of Experimental Psychology* (2 ed.). Englewood Cliffs, N. J. : Prentice-Hall. Volume translated into Italian: Italian translation of the title, city, Italian publishing house. Eg Langer, J. (1969). *Theories of Development*. New York: Holt, Rinehart and Winston (tr. It. *Theories of mental development*. Florence: Giunti & Barbera, 1973)

Style - APA

There are various bibliographic formats. The adoption of the format of the American Psychological Association (APA) is suggested: www.apastyle.org

Tip

proceed in parallel with the text file and with the bibliography file so that every time you add (or remove) a source from the text, you add (or delete) the corresponding bibliographic entry (as long as it does not appear in multiple parts of the text)

Bibliographic citations in the Text

Must contain: the surname of the author and the year of publication.

For example: "This type of behavior has been indicated as compensatory behavior (Halliday, 1975)", or "stereotypical images of subjects in developmental age have been studied by Ponzo (1974)". In the case of collaborative work:

Two authors - always report both Ex. (Walker & Allen, 2009). Up to 5 authors - are all reported in the first citation, from the second onwards only the first author followed by "et al.," First quote (Rushton, Batcheller, Schroeder, & Donohue, 2015). From the second onwards (Rushton et al., 2015). In the event that several works by the same author have the same year of publication, the lower case letters of the alphabet are used to distinguish them, eg. (Battacchi, 1985a) (Battacchi 1985b) or Battacchi (1985a) Battacchi (1985b).

Appendix

It consists of all the "extra" information that is not necessary for the understanding of what is being dealt with, but which are useful for any further information and inherent to the research itself.

As a rule, the following are reported:

tools, tests, questionnaires used

tables showing the raw data

tasks or particular materials used

very detailed analysis results

details of highly technical procedures

NB. When submitting a tool, enter:

Only a part (example) if it is a known and validated tool / The whole instrument if it has been built ad hoc

Presentation and Discussion

Sometimes the supervisor / co-supervisor asks to view the presentation a few days before the session, ask them in time to make changes if needed.

The Powerpoint presentation should be brought a couple of days before the session at the entrance of the Central University, where tests will be carried out (on a PC) to verify compatibility (ppt / pptx / odt / pdf). If you need audio, inform pnh@unipv.it at least a week prior.

- It is essential to be CONCISE and ACCURATE; report only what is CRUCIAL, avoiding irrelevant details
- Few slides (5-15)
- Few short writings for each slide (maximum 3-4)
- Figures are preferable to tables



- Do not dwell on introductory and general aspects: focus your attention on the critical and original work done
- In the case of a bibliographic thesis, illustrate in a single introductory screen the nodes through which your thesis unfolds
- In the case of an experimental thesis, report the main points of the thesis, remembering the scheme: Introduction - Hypothesis - Method - Results - Discussion and report only the most important data

Schedule the presentation of the thesis in the allotted time, suggested by the supervisor (7-9 minutes):

prepare the speech by timing yourself

do not recite the speech by heart

look the committee members in the eye as you speak

Being short doesn't mean speaking fast!

The remaining 5 minutes are for discussion (all committee members can ask you questions about your work)

- REMEMBER: Nobody knows your work better than you!

Last Suggestions

Reread, reread, reread and let others read

The more pages **IS NOT** the better the thesis

Better a short thesis, well organized with clear and logically structured parts

Experimental thesis:

- what has been done
- how it's done
- what was found
- what the results imply

Hourglass structure: from general to very specific to ultra-specific, to then return to more general topics

AVOID Plagiarism

"Total or partial appropriation of the work of others, literary, artistic and the like, which one wants to pass off as one's own" (Dizionario lo Zingarelli, Zanichelli 1999).

- always include references to the works consulted, either directly in the text of the report or in the footnote, using an adequate system for citations and including a bibliography at the end of the report

- where the ideas of others are presented quoting word by word from a text, always use quotation marks and include the bibliographic reference (citing the page)

- if you copy a part of a text directly while taking notes or while doing a search on the net, always mark (together with the copied text) that it is a direct quote and make a note of the source. In this way, you avoid the danger of forgetting that these are not your own words