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POLITECNICO DI MILANO

Consiglio di Corso di Studio in Ingegneria Gestionale (Management Engineering)

Additional information on the Final Project (M.Sc.)

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1. PREMISE

The final project represents the last exam for student's graduation. It is a synthesis of the knowledge acquired during the M.Sc. course, and it is presented in front of a commission of professors. Italian law attributes a legal value to graduation and to the School degree; hence the presentation testifies that the student deserves the acknowledgement of being a management engineer.

In the final work students are required to show research and entrepreneurial capabilities in the development of a self-contained project, mostly aiming and disclosing new knowledge, skills, and competences. As a consequence, novelty of developed knowledge, methodological and logical straightforwardness represent key parameters to evaluate the project.

The novelty is to be interpreted into various forms: novelty of the topics investigated, novelty of the empirical base of research, novelty of the interpretation of phenomena, etc.; but there is a further level of novelty that is essential: total absence of plagiarism. Plagiarism is the "use or close imitation of the language and thoughts of another author and the representation of them as one's own original work" (1995 Random House Compact Unabridged Dictionary). A final work is grounded on extant knowledge, thus the reference to the work and thoughts of other authors is not only useful but essential for the straightforwardness of the work. Nonetheless, referring to previous work is totally different from imitating or stealing the work of someone else pretending to be its author. This is not only morally deplorable, but also and foremost illegal. For this reason, the final works can be scrutinised also with a suited software and, in case of plagiarism, the student can undergo a severe disciplinary action.

2. ORGANISATION OF THE WORK

Every final project involves at least two kinds of actors:

- 1) the **student**, responsible for the content and for all the activities leading to the design and the implementation of the work. The final project can be signed by one or two students;
- 2) the **supervisor**, a Politecnico di Milano Professor or Assistant Professor, which guarantees for the work being relevant within the scope of Management Engineering and provides the graduation commission with an evaluation.

Further possible actors involved:

- 3) the **co-supervisor**, a research fellow, a professor or another person supporting the supervisor in the management and the supervision of the final work;
- 4) the **discussant**, not involved in the supervision, selected to review the final work in case it takes the form of a dissertation.

3. TYPES OF PROJECTS

The M.Sc. in Management Engineering offers the students three types of final projects with different levels of involvement and expected contribution. In particular:

- **Report** (without Discussant): the possible score is between -1 and 2/110;
- **Thesis** (without Discussant): the possible score is between -1 and 4/110;
- **Dissertation** (with Discussant): the possible score is between -1 and 7/110. An extra point can be attributed by the supervisor, the discussant and the commission in case of exceptional contribution and brilliant presentation of the work. Only for Dissertations, the Commission can decide to assign the *cum laude* when both the conditions included into the Final Graduation Exam Regulations are respected.

3.1 Report (without discussant)

The **Report** illustrates an applicative work taking one of the following forms:

- **Report on empirical activities** (generally, short stages and internships) discussed in the glance of theories acquired during the M.Sc.; internship information can be required by the Career Service: <https://www.careerservice.polimi.it/en-US/Home/Index/>
- **Review of the state-of-the-art scientific literature**, with a preference to cross-disciplinary issues and interaction of diverse theories and backgrounds. The literature review is aimed at summarising and systematizing extant knowledge.

The whole work is approximately 50 pages long (including the executive summary, excluding references).

The work is presented on the graduation day to the commission with a **short presentation (max 10 minutes)** followed by questions.

The interaction between the student(s) and the supervisor is sporadic and based on necessity.

3.2 Thesis (without discussant)

The **Thesis** is a final work taking one of the following forms:

1. **Empirical activity** conducted through interviews or other data collection methods, or during an internship, and **embedded in a state-of-the art scientific literature review** that should clarify student's understanding of the topic. The main features of the work are related to (i) the literature review, (ii) the empirical effort, and (iii) the discussion of the implications for academicians and practitioners. **The whole work is approximately 100-150 pages long** (including the executive summary, excluding references).
2. **Systematic literature review** based on a purely theoretical work in which students analyse all the literature on specific, well-established topics to provide a synthesis of what has been discovered so far, what is being analysed and the main challenges for future research. With respect to literature review of a Report, in a Thesis the student should provide:
 - i. the adoption of more thorough methodologies, e.g. content analysis within a systematic approach; AND/OR
 - ii. the creation of innovative interpretations; AND/OR
 - iii. the design of research agendas to fill literature gaps highlighted in the analysis.

The whole work is approximately 100-150 pages (including the executive summary, excluding references).

- **Detailed case study to be ideally adopted for teaching purposes.** The student(s) should find a business case (e.g. based on a short internship), identify a specific problem, and formulate the solution based on topics and methodologies learned during the M.Sc. programme. The final document should be made of: i) the description of the case and the problem (approximately 15/20 pages), ii) digital and multimedia materials to support the case, and iii) the teaching note describing the solution of the problem and the methodologies adopted (approximately 25/30pages).

In any case, the work is presented on the graduation day to the commission with a **presentation (max 12 minutes)**, followed by questions.

3.3 Dissertation (with discussant)

A Dissertation aims at developing new knowledge or innovative approaches about a topic of interest for both the scientific and the practitioner communities. The outcomes are discussed to disclose theoretical and practical/managerial implications. The novelty, in a dissertation, lies in:

- the critical review of literature; AND
- the development of research questions, hypotheses, and frameworks, AND
- new models and empiricism gathered; AND
- the discussion of the empirical results and outcomes implications.

The whole document is approximately 200 pages long (including the executive summary, excluding references).

The work is presented on the graduation day to the commission with a **presentation (max 15 minutes)** followed by questions.

3.4 Summary

Table 1 summarises the main information related to the three types of final works. Even if there are no time constraints related to the different formats, the analysis of past works shows that – on average – the elapsed time may vary. This is mainly due to the uncertainty of the different types of work (e.g. related to data gathering, external environment).

Type	Presentation	Grade	% Weight	Average time (elapsed)	Uncertainty
Report	Max 10 minutes + questions	-1/+2 on 110	Supervisor increment (50%) Commission increment (50%)	3-8 months	If the student accomplishes all the objectives set by the supervisor, there should not be any level of uncertainty about the graduation date.
Thesis	Max 12 minutes + questions	-1/+4 on 110	Supervisor increment (50%) Commission increment (50%)	5-8 months	If the student accomplishes all the objectives set by supervisor, uncertainty will lie mainly in the time requested for gathering empiricism, which could impact on the graduation date.
Dissertation	Max 15 minutes + questions	-1/+7 (+8) on 110	Supervisor increment (30%) Discussant increment (20%) Commission increment (50%)	8-12 months	Uncertainty depends on the fact that the value of the contribution can be evaluated only in the glance of the final results, hence extra, formerly unexpected, empiricism may be requested in order to reach the academic status of dissertation. This can impact even significantly on the time length of the work.

Table 1

4. HOW TO DEFINE YOUR REPORT, THESIS, DISSERTATION

The final work must deal with a topic of interest for both the student(s) and the supervisor. It is vital that the student is strongly committed in order to get a positive and successful experience out of the final project. Hence, motivation and interest are the first drivers when detecting the topic of the final work.

Two main ways to define the topic are possible:

1. The supervisor provides the topic;
2. The student(s) proposes the topic to a supervisor, and the supervisor accepts the proposal.

Generally, students are suggested, if they do not have any particular proposal to carry out, to get in contact with professors operating in the areas of major interest for them. Most of professors use to publish a (non-exhaustive) list of topics for final works on the SoM website <https://www.som.polimi.it/course/laurea-magistrale/#bacheca-tesi> and/or on the corsi-online platform <https://beep.metid.polimi.it/>

If students wish to propose a topic, they are suggested to start investigating it autonomously in order to seek novel areas to analyse, and to prepare a 1-2 pages proposal with some specifications about the objective, the novelty/relevance of the topic and the methodology proposed for the empirical exercise, and to submit it to potentially interested supervisors. The supervisor can accept the proposal, modify it and propose it back to the student, or reject it.

Students might propose possible internships as the basis of their projects.

Students should have a proper background in terms of research methods. Hence, students access to documents or seminars related to research methods for management, economics and industrial engineering is strongly encouraged in all cases (e.g. literature review, research case studies, surveys, teaching case studies).

5. COMMITMENT AND TIME MANAGEMENT

Students are completely responsible for time management during the final work, and the time efforts above mentioned are based on an average of committed full-time students.

6. INSTRUCTIONS FOR ON LINE SUBMISSION AND APPROVAL

Instructions regarding the on line submission and approval of final works and presentations are available in the following website: https://www.biblio.polimi.it/fileadmin/user_upload/deposito_tesi/PoliTesi_Instructions_2020.pdf

7. CONTACTS

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Useful websites:

<http://www.polimi.it/en/students/from-enrolment-to-degree/degree-examination/theses-and-graduation-essays/>

APPENDIX: Possible format of the final work

A final work, whatever the specific type of work, is a document that should be read by potentially every person with a sound managerial background, and the reader should be able to find all and only the relevant information to understand the effort and the outcomes of the students. The form of the final work is an important aspect in its evaluation.

Generally, the research dissertations usually have at least seven distinct conceptual parts (for projects and theses some of them may not be applicable).

1. **Abstract** (half page long, on average);
2. **Executive summary**: a brief summary of the work (3-10 pages long, on average) where the following aspects are detailed:
 - Purpose of the study;
 - Brief notes on extant knowledge;
 - Design/methodology/approach;
 - Main findings;
 - Research limitations/implications (if applicable);
 - Practical implications (if applicable);
 - Originality/novelty (if applicable);
3. **Introduction**: first part of the main body of the text, aimed at emphasising the topic investigated and its relevance/novelty;
4. **Literature review**: in this part, extant knowledge is analysed, compared, and systematised;
5. **Objectives, research methodology and research framework**: the gaps of literature, the research questions and the method to provide an answer are presented thoroughly here. If applicable, the conceptual/theoretical framework tested in the empirical exercise has to be detailed;
6. **Findings**: summary/detail of the outcomes of the study. Here results are just presented, and not discussed;
7. **Discussion**: this part includes:
 - comments on the findings;
 - answer to the research questions, with a particular emphasis on the discussion on how the outcomes confirm/confute extant knowledge or add essential new knowledge;
 - implications of the study in terms of theoretical contribution and guidelines/suggestions for practitioners (if applicable);
 - limitations of the study, i.e. discussion of the research hypotheses and methodological choices made in order to identify what is the domain where the answers provided are to be considered reliable. These limitations should suggest possible future developments of the work;
 - conclusion, i.e. a brief (2-3 pages) summary of the novel insights provided in the study.
8. **List of references**.

There are multiple options to cite the references. Here is an example.

Reference style: Citation and reference style (within the narration)

1 author:

- As argued by Cova (2003), marketing is...
- Tribal marketing levers on sociality (Cova 2003) ...

2 authors:

- Pietroni and Rumiati (1999) contend that marketing...
- Reason and emotions coexist in purchase processes (Pietroni and Rumiati 1999) ...

3 authors or more:

- Thorbjørnsen et al. (2002) say that...
- Brand relationships are not merely transaction oriented (Thorbjørnsen et al. 2002)...

More citations:

- Literature has widely emphasised the relevance of symbolism (Osgood 1957; Peterson and Marino 2003; Schmitt 1998; Thorbjørnsen et al. 2002).

Reference list (to be put at the end of the work)

Book:

- Cova, B. (2003). *Il marketing tribale*. Milano: Il Sole 24ore
- O'Sullivan, E.L. and Spranger, K.J. (1998). *Experience marketing. Strategies for the New Millennium*, New York: Venture Publishing.

Journal paper:

- Peterson, R.A. and Merino, M.C. (2003). Consumer information search behaviour and the Internet. *Psychology & Marketing*, 20(2), 99–121.
- Thorbjørnsen, H., Supphellen, M., Nysveen, H. and Pedersen, P.E. (2002). Building brand relationships online: a comparison of two interactive applications. *Journal of Interactive Marketing*, 16(3), 17- 34.

Research report:

- Osservatorio eCommerce B2c – Politecnico di Milano (2019). *La sostenibilità ambientale nell'eCommerce B2c*. Available at: <https://www.osservatori.net/it/prodotti/formato/report/sostenibilita-ambientale-ecommerce-b2c-report>
- Osgood, C.E. (1957). *Motivational dynamics of language behaviour*. Nebraska Symposium on Motivation, University of Nebraska Press, 348-424.

Online-only material:

- Schmitt, B. (1998). "The power of a luxury experience", Available at: www.exgroup.com/index. Last access: 2006/12/23