

## **INSTRUCTIONS FOR WRITING A RESEARCH PROPOSAL – IMPDET PhD STUDY PROGRAMME**

**Note:** the following instructions are only suggestions and hints on how to proceed with the research proposal. The aim of this document is to give you guidance regarding the structure and objectives of the proposal. The supervisors might have their own preferences regarding the structure and content of the proposal, which need to be taken consideration.

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## 0. Introduction

Research proposal is the most important component in the PhD application process. The main aims of writing a research proposal are

- to ensure that applicants have done preliminary research and readings in the selected research area,
- to show that applicants are able to produce a scientific description of the topic they intend to investigate and capable to proceed with the planned research work
- to enable IMPDET staff to evaluate the level of maturity of the applicant

It is important to remember that the research proposal is just a preliminary plan for the PhD research work. It is rather common that research problem or even the research topic will change during the studies. The first research plan is a point of departure for your PhD study research work. On the other hand, a well written plan provides you concrete steps on how to proceed with your research work.

The criteria for a successful research proposal are

- 1) the candidate has identified a relevant (and solvable) scientific problem, preferably within the research topics of the IMPDET community
- 2) the proposal includes description of theoretical background and relevant literature as well as discussion about appropriate research methods to solve the research problem.
- 3) the candidate can show that he/she is capable of producing independently original and new scientific knowledge.
- 4) the research proposal should be at least **four pages**, but not more than **ten (10)** pages long. It should have a clear layout (e.g. consistent use of fonts, table and figure headings), page numbers and a table of content.
- 5) The proposal is **original work**. If any plagiarism or verbatim copying of text (without appropriate references) is spotted, the application process will be terminated immediately.

The proposal should have the following structure

- 1) Cover page and abstract
- 2) Introduction
- 3) The problem statement: objectives, research questions and hypothesis
- 4) The literature survey
- 5) An outline of the research design
- 6) Expected findings and their implications
- 7) Plans for funding
- 8) Selected research bibliography

## 1. Cover page

In the cover page of your proposal, please provide first the title of your research proposal. Please take extra care on selecting an appropriate title to describe your topic. The title should be brief and accurate, but at the same time descriptive and comprehensive. The title should also not be too general.

The title should be followed by the following information

- your full name
- academic title
- your current work position (if applicable)
- your date of birth
- nationality
- email address

After the cover page, an abstract should be written. The abstract should quickly tell a reader the essence of the proposal. A good abstract should (Olivier, 2009)

- present the background of the project;
- provide a short and precise problem statement;
- mention the research method(s) applied; and
- provide information about the expected results.

## 2. The introduction

In this section, you should discuss about the “big” picture of your research proposal. Describe the background and the context of the research proposal in order to show the rationale and motivation. According to Olivier (2009), a good introduction starts with a discussion about the research field, but soon provides a specific description about the research project. In the introduction section, it is also important to discuss about the relations of the research proposal to existing research topics in the IMPDET program. It is also worthwhile to discuss about societal aspects of the research work, if they are applicable to your work. All the statement you made should be properly referenced.

## 3. The problem statement: objectives, research questions and hypothesis

In this section, the research problem is stated in detail. It is common that the main research problem is stated in a form of question or hypothesis. The problem statement section also often includes a description of the research objectives (e.g. what are the expected accomplishments).

Your proposal needs to show and justify why the intended research is important and relevant. Provide a clear outline of the academic aims that you want to achieve. In some cases, the research proposal has also practical, social and even political implications, which are also important to elaborate. All research should be part of a larger scholarly

work and PhD candidates should be able to argue the value and positioning of their work in relation to the existing knowledge.

One of the most important aspects of your proposal is to specify and clarify the research problem. Your most challenging task might be to narrow down the topic into a research proposal that can be investigated using appropriate methods. The contributions of the research can be empirical (e.g. you hope to add or extend an existing body of knowledge), theoretical (e.g. you expect to provide new conceptual insight) or even practical (e.g. you expect to provide concrete change to solve, for instance, an educational problem) in nature. An applicant should pay extra attention when writing the problem statement section, because this section provides the information about your intentions. Please also make sure that in the following sections, you discuss about how you are intending to solve the stated research problem.

#### **4. Literature survey**

In this section, you should present the work published in the literature related to your research topic. The aim is to give a short and precise overview of previous research that has been conducted related to your research problem (Olivier, 2009). Identify some of the most important contributions of previous research work. The proposal should also include a discussion of the theoretical framework or ideas that will be used to frame the research work. The proposal needs to show that you are acquainted with the topic you are dealing with and that you are able to relate your research topic to the existing knowledge in the field. Your literature review should provide motivation to the proposed research project. Please also discuss how your own research will advance or provide new perspective to the existing research. Olivier (2009), gives hints on writing literature survey section

- Structure the content presented by other researcher (summarise, synthesise, critically contrast results from different studies)
- Do not go into details on other projects, but use references to guide the reader to the appropriate source
- Highlight the essential aspects of other work

#### **5. An outline of the research design**

In this section, you should provide a detailed description about the intended research process, including the description of the research design and procedures. It is highly important to explain, the exact phases/steps of the research, the sources and quality of your evidence, the research methods you will apply, the data collections methods and the expected timetable of your work. You should also describe the research contexts, e.g. research settings, participants.

The outline should be supported by an estimated schedule of the project, indicating the sequence of research phases and the expected time needed to complete each phase. The

research schedule can only be tentative, but you should be able to estimate the overall work load needed to complete the research work.

### **7. Expected findings and their implications**

Give a short overview of the expected findings of your research work and discuss about the possible implications, which can be in academic, practical, societal or even political level.

### **8. Plans for funding**

Provide a realistic plan on how you are intending to fund your studies. In the IMPDET study programme, there are not scholarships available at the moment. You should consult with your supervisor/IMPDET staff in order to create a plan on how you are able to fund the studies. Most of the current IMPDET students are studying while working. If this applies also to you case, you should provide a short explanation on how you are able to proceed with the PhD research while working.

### **9. Selective research bibliography**

Here you should list those academic works which you have refereed in your research proposal as well as number of other important works on which you will be using during your research. You should have minimum of 10-15 references in your research bibliography.

### **References**

Olivier, M.S. (2009). Information Technology research: A practical guide for Computer Science and Informatics (3 rd. Ed.). Van Schaik Publishers.