



Graduate Programme in Health Informatics

Guide to Writing MSc Project Proposals

Module code: CHMEGH98

Academic Session 2011-12

Introduction

This document provides a description of what to include in your proposal and how to structure it.

There are a number of different kinds of project that you might chose including implementation, evaluation, survey, observational, interview, focus groups, literature review, mixed and others. Each type will have variations in content hence you will need to adapt the checklist to the most meaningful subheadings. If in doubt, look at published papers to see what subheading they use and discuss with us.

Proposal Format

The format will reflect that to be used for the eventual dissertation, except that no abstract, discussion or conclusions are required. The headings will probably be:

- Title
- Background
- Rationale for doing the project ending in research question, aims and objectives
- Methods/Design
- Method for analysis
- Project Plan
- References
- Appendices (if relevant)

The proposal should not be more than 3000 words in length and contributes to 20% of your final mark.

Title

The title should be concise and accurately describe the nature of the dissertation.

Background

This provides a context for your research and explains the relevance of your work, both to the health community within which the work was conducted and the wider scientific community. Focus on the literature and avoid mentioning your study explicitly at this stage. You should not assume that the reader knows or understands the application or the concepts you are writing about. It is best to imagine that you are writing for an interested, intelligent audience with some knowledge of informatics but who may not share your own background or know anything about the institutions within which you work. You should not use jargon and must explain any abbreviations or specific terminology.

In the proposal you do not need to provide the kind of analysis of the relevant literature that will be expected in the dissertation. The supervisor, however, will need to judge that the specific question you are intending to explore is both interesting and relevant. This will normally involve referring to related work and specific findings. You will also want to demonstrate some awareness of the field. If you find that there is a limited quantity of research which is directly relevant, you should move further afield to provide a broader context. Whilst the temptation is to select the work that leads up to your ideas, you will strengthen your case considerably by briefly mentioning different standpoints on an issue. This will also help you when you come to discuss your findings should they come out unexpectedly later on in the research. You should be able to provide references for all findings or statements taken from the literature.

Rationale

You should provide a rationale for undertaking the investigation with a clear statement of your question, the aims and the project's clinical relevance. This is perhaps the most important element in the proposal. You may find it helps to write this section first as it will help clarify your ideas. Give an explicit statement of the question you seek to answer.

Method

A variety of methods are appropriate and the form that this section can take will vary from approach to approach.

You should give sufficient detail to convince the supervisor that you have thought through the idea and that you have worked out what is required. It will help to justify your choices and to give research references where appropriate.

Give a detailed, step by step account of what you intend to do. There needs to be sufficient detail that the reader could replicate your study.

You may need to describe where your study is taking place, how data is to be collected and explain how subjects are to be recruited. What approval or agreement will you need from patients, staff, colleagues other professionals?

Potential subheadings may include:

- Setting
- Subjects/records/cases/selection of literature critique papers
- Ethics
- Design
- Procedure

These are guidelines, in some cases this format may be inappropriate so you can add or subtract sections. For instance a questionnaire study may have a section entitled Questionnaire development which encompasses the design and pilot study sections. A literature review will still need a justified method but you will adapt the headings. The particular way in which you sub-divide your method section will depend on you.

Analysis

Again this depends very much on the kind of project you carry out. However, you must explain what form the results will take. This might be a question of explaining how the software will be tested. What will count as a successful implementation? What performance measures will be taken? It might be more a question of explaining how some other form of data will be presented, such as interview, question or record analysis data. What statistical analyses will be used if appropriate?

Project plan

In addition your proposal must also include a project plan consisting of a set of milestones and a timetable for achieving them. If appropriate a Gantt chart could be used. It is essential that you identify any potential obstacles. Whose approval is required before you can access the data? Is special software or equipment required? Are you reliant on the co-operation of any colleagues or any other group? Are there

any ethical or legal issues to be resolved? You need to demonstrate to the supervisor that what are intending to do is achievable and that you have thought through exactly what is required to achieve it.

References

These must be presented carefully, consistently, completely and in a standard format, usually Harvard.

It is essential that all sources are properly referenced in order to safeguard against charges of plagiarism and to protect the rights of authorship. If you need to cite a section of text word for word in the main body of the text, it should be enclosed in quotation marks, with the surname of the author, the date of publication and the page where the reader will find the reference in brackets. Similarly, paraphrased sections of text should have a source reference. Plagiarism is inadmissible, and is easily detected.

The reference section is important - ensure that it is complete and tidily presented. All the references you use in your text should be listed in full and in alphabetical order.

Appendices

These include anything that is not directly relevant and would interrupt the flow of the text, but would provide extra information for the interested reader (correspondence, instructions to subjects, consent letters, invitations, draft questionnaire, draft checklists, raw data, etc). Assume the reader does not need to read them to understand the project – they are for additional reference only.

The writing process

Allow yourself plenty of time for the writing process. It will take much longer than you initially think. Developing and keeping to a schedule can often make the task easier. Budget enough time to make amendments and to incorporate comments from your colleagues.

When using unusual technical terms you should provide a definition. Try not to use unnecessary jargon as it can become confusing and irritating, and will make your dissertation difficult to read. Similarly, abbreviations should be kept to a minimum. The best way to learn about the appropriate writing style is to look at published journal articles or recent dissertations in the library.

Most scientific papers are written in the third person passive voice where the form of the verb stresses the action over the object. The subject is acted upon rather than acting. As a result personal pronouns are rarely used. For example, instead of writing “I interviewed twenty nurses about their attitudes to...” you would write “Twenty nurses were interviewed about their attitudes to...”.

Checklist for Research Proposal

When writing up your own research proposal, make sure that you have covered any of the relevant issues outlined below. Not all will be relevant for all designs, but use them as a prompt.

	?	Comments
Title: <ul style="list-style-type: none"> • Is it relevant? • Is it accurate? • Is it interesting? 		
Background: <ul style="list-style-type: none"> • Is the literature reviewed critically? • Is the research question clearly defined? 		
Rationale: <ul style="list-style-type: none"> • Is there well documented supportive rationale for importance of carrying out the study? • Is the null or research hypothesis testable? 		
Method <i>a) Setting and</i> <i>b) Subjects/cases/records/papers</i> <ul style="list-style-type: none"> • Adequately described: number, characteristics, inclusion/exclusion criteria? • Representative population? • Sample bias? 		
<i>c) Ethics:</i> <ul style="list-style-type: none"> • What are the ethical considerations? Referenced? • How were/will they be tackled? • Will an ethics committee be consulted? • Informed consent of subjects/patients? Draft letter? 		

	?	Comments
<p><i>d) Design:</i></p> <ul style="list-style-type: none"> • Sufficient detail for replication of study? • Appropriate to answering the research question? • Is a pilot study described? • Minimisation of biases? 		
<p><i>e) Measurements:</i></p> <ul style="list-style-type: none"> • Reliability and validity of tools? • Data collection measures described (eg questionnaire, assessment form/questions/coding frame)? • Drafts? • Assessors described • Reliability /validity of person taking measures (inter-reliability?) 		
<p><i>f) Procedures:</i></p> <ul style="list-style-type: none"> • Describes stages and timing? • Instructions given? • Describes who will collect the data? 		
<p><i>g) Data Analysis/results:</i></p> <ul style="list-style-type: none"> • Appropriate and adequate for type of study and data collected? • Name of intended tests (if any) given for pilot and main study? 		
<p>References:</p> <ul style="list-style-type: none"> • Are they in the appropriate format? • Are all sources cited in the text included in full at the back? 		
<p>Style:</p> <ul style="list-style-type: none"> • Precise and concise? • Logical sequence of ideas (i.e. a story to follow)? • Professional terminology appropriate (no jargon)? 		