

# Writing the Research Proposal and Research Report

## CHAPTER LEARNING OUTCOMES

When you have completed this chapter you will be able to:

- Describe the elements of a research proposal
- Write a research proposal according to the proposed format
- Explain the elements of a research report

## INTRODUCTION



This chapter will focus on the writing process and will address two important tasks that most graduate students will have to do. First, is the writing of the research proposal and second is the writing of the research report.

## WHAT IS A RESEARCH PROPOSAL?

A research proposal is defined as

- Research proposal serves as a plan of action. It conveys researcher and others as to how study will be conducted.
- A document that is typically written by a scientist or academic which describes the ideas for an investigation on a certain topic. The research proposal outlines the process from beginning to end and may be used to request financing for the project, or for certification/degree.

Good proposals quickly and easily answer the following questions:

- What do you want to do, and how do you plan to do it?
- How much will it cost, and how much time will it take?

All graduate students pursuing a programme requiring the submission a project paper, thesis or dissertation will have to write a research proposal. What is a research proposal? A research proposal is a short document (usually 10-15 pages) written to inform others (you supervisor or graduate committee) of a proposed piece of research. You should be aware that a research proposal can be rejected as “unsuitable” or “poorly designed”. So the proposal is obviously an important document. Therefore it is that you spending some time getting it right. A well planned proposal will save you a lot of time in the long run. If the proposal is well-designed, it will form the outline of your project paper, thesis or dissertation which you can follow. In other words, the proposal maps out the different parts of the final project paper, thesis or dissertation. The elements that are usually included in any research proposal is shown in the template below.

### **a) Introduction**

Rationale should answer the question “why” this study is conducted? It “why” is answered properly, then rationale a strong one. For strong rationale, the section of review will be of much help. Identified research gaps will convey as to “why” this study is conducted. Suppose the investigator wants to study the following problem:

#### ***“Development and Try out of CAI in Teaching of Science for Class VIII”***

Here, the researcher should try to answer why CAI only?

Why it is in Science teaching only?

Why it is for class VIII only?

If these questions are answered adequately, then rationale becomes strong. Here one has to identify gaps in the area of Science teaching especially with reference to CAI. Apart from this, the need for conducting the present study be justified.

- This where you provide an introduction or background to the research problem or issue that you intend to study. This should be as brief as possible (2-3 page). Do not ramble! The introduction should be clear and straight to the point. Describe the general field of research and than narrow down to the specific area you are concerned with.
- Show that there is an issue that needs to be addressed or a “gap” in the research that you will fill. When you are able to identify the issue or gap, than the research question will fall in place naturally. Think of the Introduction as follows:

Imagine a group of academics discussing in general the area of study you are interested in. You join in the conversation (assuming they allow you to!) and draw their attention to your specific problem of interest. You tell them that there is something that has not been resolved or there is a gap or problem. You argue that this gap or problem has to be addressed and go on to describe it in detail. Than you tell your listeners how your study will attempt to answer the research question.

- **Problem Statement:** Remember, the problem statement may only be tentative at this stage as the research has not been carried out yet. It is not expected in a proposal that you have an answer to your research question. It helps if you have a tentative answer, however. A hypothesis is useful for this purpose, though this might only be necessary for more empirical subjects.
- You should use simple and jargon-free language. The introduction must actually narrow down; not get wider. You must demonstrate that you understand well the issues in the area and that you are focussing on a particular issue.

**b) Objectives, Research Question and Hypothesis**

- While reading the statement of the problem, there may be bit confusion to avoid such confusions there is a need to have specification of a research problem. This specification can be done by writing research objectives, questions, and hypotheses, by writing operational definitions thus, objectives give more clarity to researchers and reactors objectives are the foundations of the research, as they will guide the entire process of research. List of objectives should not be too lengthy not ambiguous. The objectives we stated clearly to indicate what the researcher is trying to investigate.

While conducting any research, researcher would definitely aim at assuring certain questions. The researcher should frame such questions in a precise way. Some researchers simply put the objectives in the question form, which is just duplication of objectives, which be avoided.

Depending on the nature of study, the researcher would formulate hypotheses. Researcher can write 1 hypothesis either in null form or alternative form. A hypothesis has to be:

- (i) testable, (ii) state expected relationship between variables.

**c) Significance of the proposed research (Justification)**

- Briefly tell the reader the significance of the study (justify doing the study).
- You can argue the significance of your study based on the following criteria:
  - the problem or gap demands attention because the findings could influence practice and policy
  - the methodology you are using is unusual
  - you are studying certain variables that has not been given attention in previous studies
  - your study will contribute to the body of knowledge in the field.
  - the outcome could be the extension of a theoretical model,

**Template for the Research Proposal**

**1.0 Introduction**

- **General to the specific Discussion/ Rationale**
- **Problem statement**
- **Objectives of the study**
- **Research question and Hypothesis of the study**
- **Significance of the study**
- **Limitations and Delimitations of the study**

**2.0 Literature Review**

- **Previous studies**
- **Theoretical framework**

**3.0 Methodology**

**4.0 Proposed Data Analysis**

**5.0 Project Timetable**

**6.0 References**

**7.0 Appendix**

**d) Limitations and Delimitations:**

- In any research, it is not possible to cover all aspects of the area of interest, variables, population and so on. Thus, a study has always certain limitations. Limitations are those conditions beyond the control of the researcher that may play restriction on conclusions. Sometimes, the tool used is not revalidated. This itself becomes limitation of the study. Thus limitation is a broad term, but delimitation is a narrow term.

- **Delimitation indicates boundaries of the study.**  
 The study on achievement in English can be delimited to only PEF aided school, which includes schools who follow Punjab Education Foundation’s FAS (Financial Assisted Schools) program, so here beyond this conclusion cannot be extended. This can be made more specific by specifying the population and sample.

**e) Review of Related Literature**

- This is where you provide more detail on what others have done in the area, and what you propose to do
- You need to cover the following:
  - The major issues or schools of thought
  - The gaps in the literature (in more detail than that provided in the introduction)

- Research questions (for qualitative research and hypotheses (for quantitative research) which are connected carefully to the literature being reviewed
- Definition of key terms (this can be done when you introduce each idea, or in a definition sub-section)
- Questions arising from the gaps that can be the focus of data collection or analysis
- The theoretical framework usually forms the final part of the Literature Review section. It describes the model that you are using in the thesis to demonstrate your point
- Read a thesis in a similar area to get a feel for what is required in this section.

Try to justify that all such located studies are related to your work. For locating such studies one will refer following documents / sources.

- Ph. D. Theses available in various libraries.
- Current Index to Journals in Education (CIJE)
- Dissertation Abstract International (DAI)
- Educational Resources Information Centre (ERIC) by U.S. office of education.
- Various national / International journals, Internet resources (For detail see Ary, D., Jacobs, L.C., and Razavieh A. (1972). Introduction to Research in Education N. Y. Holt, Rinehart and Winston, ING pp 55 – 70)

The researcher should conclude with following points:

- What has been done so far in this area?
- Where? (Area wise)
- When? (Year wise)
- How? (Methodology wise)
- What needs to be done?
- Thus, the researcher will identify the “Research Gap”.

#### **f) Proposed Research Methodology (Design, Population, Sample, Tool)**

- You do not have to describe the methodology used in great detail (this will be done in the thesis) but you should justify its use over other similar methodologies.
- For example, you could explain:
  - Why you are using a certain paradigm or theory
  - Why you are using qualitative or quantitative research
  - Why you are using a case study of a specific kind
  - Why you are using surveys, correlational experiments, field studies, specific statistical measurements, etc.
  - Why you are using a certain dependent or independent or moderating variables
  - Why you have chosen a sampling frame and the size of a certain sample
  - How you are proposing to have access to the data
  - How you are proposing to analyse the data

- You also need to provide operational (testable or at least well-supported in the literature) definitions of key terms used.

**g) Proposed Data Analysis Technique:**

- This is crucial step in proposal. As to how collected data will be tabulated and organized for the purpose of further analysis is to be reported in this section. If it is a quantitative research, parametric or non-parametric statistical techniques will be used need to be reported. Before applying any technique for data analysis, verify the needed assumptions about that particular technique. Suppose if one wants to go for ANOVA, verify about assumption for normality, nature of data – especially in interval or ratio scale, homogeneity of variances and randomization. If it is qualitative analysis, detailed out about nature of data, its tabulation, organisation and description. If data are to be analysed with the help of content analysis, how exactly it will be done needs to be detailed out. Whichever technique one is using, it needs to be in tune with objectives and hypotheses of study.

**h) Project Timetable**

- Provide a project timetable specifying how long you will take to complete the project paper, thesis or dissertation. For example, indicate how long you will take to collect data, analyse the data and write up the final report.
- It gives you a framework on the direction your proposed thesis will take It shows the reader that the project is well-organised and achievable in the time available.



**i) List of References**

- During preparation of proposal, researcher consults various sources like books, journals, reports, Ph.D. theses etc. All such primary / secondary sources need to be reported in the reference. Generally American Psychological Association (APA) Publication Manual be followed to write references. All authors quoted in proposal need to be listed in bibliography. Authors who are not quoted but they are useful for further reading be also listed.

**j) Budget**

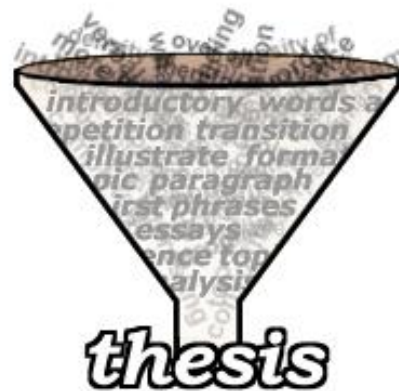
- The proposal submitted to the funding agency needs details regarding financial estimates. It may include expected expenditure keeping various budget needs. While preparing budget, examine the guidelines given by particular funding agency.

## RELATIONSHIP BETWEEN THE RESEARCH PROPOSALS AND THE FINAL RESEARCH REPORT

Note finally that while the proposal can be mapped onto the final thesis, much work needs to be done. The proposal merely provides a “shell”. The thesis fills in the details. Parts of the proposal are not required in a final thesis (for example, resources, the timetable). The order and arrangement of each document is slightly different.

## THE RESEARCH REPORT

The purpose of this section is to give you a general guide for preparing the project paper, thesis or the dissertation. The format discussed may vary with respect to institutions. See box below which shows widely used format for the research report.



### a) Preliminary Materials

The preliminary materials include the title page, the abstract, acknowledgements, table of content, list of tables and list of figures.

- **Title Page:** Although title page may differ from one institution to another, they usually include: (1) the name of the topic, (2) the name of the author, (3) the relationship of the report to a degree requirement, (4) the name of the institution where it is to be submitted, and (5) the date of presentation (see Figure 10.3). The title should be concise and should indicate clearly the purposes of the study. Keep in mind its possible usefulness to the reader who may research the database in which it may be listed. The title should not claim more than the study actually delivers. It should not to be stated broadly and make it difficult for the reader to pin point what the study is about. For example, the title “*The Self-Concepts of Urban Poor Children*” is too general and a more precise title would be “*The Self-Concepts of a Group of Urban Poor Children in Kuala Lumpur*”.
- The title should be in capital letters, single-spaced and centred between the right and left margins of the page. If the title goes beyond one line, the words in the title should be divided into lines so that each successive line is shorter than the one above it and is centred below it in an inverted pyramid style (see Figure 10.3).

- **Acknowledgement**: An acknowledgment page is included if you have received unusual assistance in the conduct of the study. The acknowledgement should be simple and restrained. Do not indulge in flattery and excessive recognition for routine participation of family members, lecturers, supervisors, librarians and clerical helpers.
- **Table of Content** : A table of contents serves an important purpose in providing an outline of the contents of the report. Differentiate between headings and subheadings using capitalisation and small letters. Page references for each topic should be indicated.
- **List of Tables and Figure**: If tables and figures are included in the report, a separate should be included to list each table or figure. The full titles of figures and tables, worded exactly as they appear in the text, are presented with corresponding numbers and page locations.

**Note:** All pages in the preliminary section are numbered at the centre of the bottom margin with lower-case Roman numerals (i, ii, iii, iv).



## Format of the Research Report

### Preliminary Materials

#### **TITLE PAGE**

**Acknowledgements**

**Table of contents**

**List of tables (if any)**

**List of figures (if any)**

### Body of the Report

#### **Chapter 1: Introduction**

- **General statement of the problem**
- **Statement of the hypotheses, objectives or questions**
- **Definition of terms**
- **Significance of the study**
- **Limitations of the study**

#### **Chapter 2: Review of the Literature**

- **Review of previous studies**
- **Opinions**
- **Theoretical framework**
- **Summary of the state of the art**

#### **Chapter 3: Methodology**

- **Description of subjects**
- **Research design and procedures**
- **Description of measures employed**

#### **Chapter 4: Findings**

- **Overview of statistical procedures**
- **Description of findings (relate to hypotheses, objectives or questions)**
- **Tables, graphs**

#### **Chapter 5: Summary and Discussion**

- **Summary of main findings**
- **Conclusions and Interpretation**
- **Implications**

**References**

**Appendix**



## **b) Body of the Report**

It is usual for this section to be divided into 5 sections or chapters.

### **Chapter 1: INTRODUCTION**

The first chapter serves as the introduction to the area under consideration. A clear *statement of the problem* with specific questions to be answered or hypothesis to be tested is presented. You should present the *significance* of the problem and its historical background appropriately. Also, include assumptions and *limitations* of the study. All *important terms that are operationally defined* should be included in this chapter. This is important because terms such as *gifted*, *underachiever* and many other terms are defined differently by different researchers.

### **Chapter 2: REVIEW OF RELATED LITERATURE**

This chapter is a review of important literature related to your study. Extracts from previous research studies and significant writings of authorities in the area studied are reviewed. This chapter provides a background for the development of your study and brings the reader up to date about research and thinking in the field. It also gives evidence of your knowledge of the field. You should avoid an article-by-article presentation but should indicate areas of agreement or disagreement in findings or gaps in existing knowledge. The journal *Review of Educational Research* can be referred to for examples of good critical reviews of the literature. Also, avoid excessive use of quotations. Nothing is more tiresome or difficult to follow than a review of literature that is merely an accumulation of quotations.

### **Chapter 3: RESEARCH METHODOLOGY**

This chapter explains the design of the study in detail.

Sampling: It is here that you explain the size of the *samples* and how you selected them. Indicate the extent to which the sample is representative of the population. Did you use random sampling? Did you use stratified sampling?

Setting: If you are doing a qualitative study, you have to explain in detail the setting, the characteristics of your subjects, how you gained access or entry to the setting and your role in the study (e.g. observer, participant observer).

Instrumentation: You should include a description of the data collection techniques or instruments you used. For example, if your study is a survey you have to explain how you design and developed the questionnaire or interview checklist. Explain the number and types of items included in the questionnaire. If you had used attitude scales, achievement tests and other psychological tests; you have to give evidence regarding the reliability and validity of the instruments. You may also describe the scoring procedures adopted for the instruments used.

#### **Chapter 4: ANALYSIS AND INTERPRETATION OF DATA**

In this chapter, you present the findings of the study after having processed and analysed the data. This is the heart of the research report. If you are doing a qualitative study, tables and graphs are commonly used to organise and present numerical data. Tables and graphs are useful in presenting an overall picture of the data as well as showing trends that have emerged from the analysis. If you did a qualitative study, there would be less numerical data. Instead your data would consist of concepts, categories or themes which may be presented in table form. You would also be presenting data in the form of anecdotes or excerpts of interviews, observations and from documents to support your arguments. You are advised to refer to the *Journal of Educational Psychology* and *American Educational Research Journal* to see how tables and graphs are presented and explained. For qualitative studies, *The Qualitative Report* is a useful journal which presents reports of qualitative studies in education, nursing and medicine.

#### **Chapter 5: SUMMARY, FINDINGS, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS**

The last chapter comprises of five parts. The first part includes: a brief *summary* of the problem, methodology and results. Focus should be on a summary of the findings and it should be as brief as possible. Some researchers present the main findings in the form of list. The other part is a *discussion* of the findings. Here, you identify and interpret the findings. You give possible reasons why the results occurred. You could provide reasons by referring to the findings of previous research. Because you are the one who conducted the study, you have a deeper understanding of the study compared to most readers you are expected to discuss the findings and to give your own opinion. One of the most common weaknesses found in the writing of graduate students is that their reports present important and interesting findings but fail to provide a thoughtful interpretation of the findings. On the other hand, there is the tendency for beginning researchers to overgeneralise on the basis of their limited data. Remember, your study is not attempting to change the whole education system! For example you could use the following comments about your report:

“Your study to this point has been good.  
Your summary is disappointing.  
What you have reported may possibly  
be true, but there is nothing in your study  
to justify or support your conclusions”.

You should keep in mind that this chapter is the most used part of the research report by other readers. Readers who scan research literature to find significant studies examine this chapter before deciding whether or not further examination of the report is worthwhile reading.

**c) Reference Materials**

This section of the report comprises the References and Appendixes (if any). References are arranged in alphabetical order with the last name of the author listed first. Here you would include journal articles, books, chapters in books, monographs, reports, newspaper articles you have cited in the report. The common mistakes with the Reference section are:

- You had cited an author in the report but it is not listed in the References and vice-versa.
- The method of referencing does not follow a consistent format (In education, the format used is by the *American Psychological Association* – APA format).

The appendix is indicated by the word APPENDIX, capitalised and centred on the page. The first page of the appendix is title APPENDIX A followed by APPENDIX B and so forth. What may be included in the appendix?

- Tables and data – important, but not essential to the understanding of the report
- Copies of cover letters used, and printed forms of questionnaire, tests and other data –gathering devices.
- Item-analysis data and other materials pertinent to measures
- Scoring procedures

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