**Research Report**

**1.0 INTRODUCTION**

The importance of a research study is to evaluate both scholastically and practically the contents of the written proposal and report of the study. The merit of the problem and its adequacy is examined on the basis of research proposal and the contribution of the study is judged on the basis of research report of thesis of the study. There are various formats of educational research reports. The following are the major writings formats of research work.

**1. Research Proposal or synopsis or outline of a research work or project.**

**2. Research Report or thesis**

**3. Research Summary, and**

**4. Research Abstracts.**

A research proposal deals with problem or topic that is to be investigated. It has a variety of formats which vary in their length. Writing a research proposal or synopsis includes an introductory section: problem hypotheses objectives, assumptions, method of study tools, justification and implications of the study. It is written in present or future tense. It covers four to ten pages. It is submitted for the final approval before starting the actual research work. The preparation of research proposal is significant in the development and pursuit of a research project. It is planning phase of a research work which is produced in the written form to judge its worth.

A research report deals with results of completed research work. After completing a research work, it is generally produced in the written ‘form, and is called research report or thesis. A detailed description of research activities are provided in it. It has a variety of formats and vary as to its length. It is written in past tense and in third person. It is the final form of the research work. A research report includes usually the following chapters-Introductory or theoretical background, Review of related literature, Methodology, Data collection, Analysis of data, Discussion of results and findings of the study, Bibliography and Appendices. It is also submitted for evaluating its contributions. It serves the purpose of communicating the results of a research work done.

A research summary is the condensed version of research report. It provides the important aspects of research report or thesis. The purpose of the summary is to facilitate the readers or other scholars to understand about work done at a glance because to go through a research report it is very time consuming and difficult. Therefore, the main features of research report are summarized. It takes the form of research journal article or paper. It is also written in the past tense and covers six to twelve pages.

A research abstract is the condensed version of research summary. The main essence of the research work when reduced to a page or para is called research abstract. It includes title, method, sample and findings of the study. These abstracts are published in the journal as Abstracts.

**1.1 THE RESEARCH REPORT**

The writing of research report is usually the concluding task of the research endeavor. Everything is combined together during the writing of the report. This is the point at which the research must be essentially reproduced in written form. It is a matter of communicating what was done, what occurred, and what the results mean in a concise, understandable, accurate and logical manner.

This is not the difficult task because the researcher has gone through these tasks which he has to reproduce in the same order. Good research reports are not easily written. The report writing is a skill it must be acquired by the researcher.

Since the written report is an account of research project, the organization of the report follows quite closely the organization of the research project. The writing of the report is usually associated with the close of the research for project; few portions of writing may be done while the research study is in progress. The preliminary drafts of the review of the literature can be written and revised and brought upto-date later. Research procedures can be recorded as the project is conducted and while it is fresh in the researcher’s mind. It is difficult to write from memory and avoid serious omissions.

The writer should assemble the available information before taking to the writing work. Mechanical procedures for presenting foot notes, references, figures, tables and the like should be well in mind. In the interest of efficiency and continuity, relatively lot of time should be reserved for the writing work.

The research report should contain all the necessary data and at the same time it should be brief and to the point. There is usually considerable changing and rewriting before the final draft. The report is also known as thesis or dissertation.

**1.2 NEED OF RESEARCH REPORT**

Writing a research report is very challenging task for the researcher. A good research report requires sufficient-experience and insight about his research activities. A research report is needed due to the following reasons:

• The research must be reported in full and its results should be subjected to a criticism and verification.

• The research work is done for the benefit of human being, therefore, it must be communicable to the general public for the practical use.

• The research should be considered to be the culminating act for reflective thinking. It encourages other persons to take up some problem for further investigation.

• The research report requires the creative thinking of a researcher to review the related studies and discussing the result of the study and also suggest some new problems for further studies.

• The research report is also necessary for giving shape and form to the investigation and solidifying it.

• It is needed for providing a clear picture of research method, sample and techniques used in conducting the research work.

• The research report is meant for popularizing the new contributions in the discipline.

## 1.3 GENERAL FORMAT OF RESEARCH REPORT

A written format of a research work is known as thesis or research report. All such works may differ considerably in scope of treatment and details of presentation. Even then all types of research reports are expected to follow a general uniform, common pattern of format, style and structure. The general format of research report is evolved and it has become a tradition in academic area. A research report or thesis is an organized format of research work done. It is viewed in three major categories:

1. Preliminaries,
2. Textual Body, and
3. References.

Each category has been outlined further as follows:

1. Preliminary Section
	1. Title page
	2. Preface or acknowledgements
	3. Table of content
	4. List of tables (if any)
	5. List of figures (if any).
2. Main Body of Report or Textual Body
	1. Introduction
		1. Statement of the problem
		2. Objectives of the study
		3. Hypotheses to be tested
		4. Significance of the problem
		5. Assumptions and delimitations.
		6. Definitions of Important terms used.
	2. Review of related literature.
	3. Design of the study (Methodology)
		1. Method and procedure used
		2. Tools of research or sources of data
		3. Techniques of data collection
		4. Description of techniques used.
3. Analysis and presentation of data (Results and Discussion)
	1. Analysis of data
	2. Tables and interpretation
	3. Figures and interpretation.
4. Conclusions
	1. Discussion of results
	2. Main Findings and inferences
	3. Implication of the findings and limitations
	4. Suggestions for further studies.
5. Reference Section
	1. Bibliography
	2. Appendices (if any)
	3. Index or glossary (if any).

The detailed explanation of each aspect is given here

## A. PRELIMINARY SECTION

As the preliminaries form a significant part of the whole thesis report, due care should be taken in preparing them. If the specifications are already laid down by some colleges or universities they should be observed. However, a general standard pattern suggested here in each case will be helpful for a researcher.

## Title Page

This is the first page of a thesis or a dissertation. It includes:

* 1. Title of thesis.
	2. Name of the candidate.
	3. Purpose or relationship of the thesis to the course or degree requirement.
	4. College and/or department in which the candidate has been admitted for the degree.
	5. Name of the university to which it is submitted.
	6. Month and year of submission or acceptance.

The title should be accurate, concise and clearly printed in **capital** **letters**. It should convey the main theme of the problem investigated and if possible one should give a clue about the method or type of research involved.

## Preface or Acknowledgement

A preface is different from introduction. It is a brief account of the purpose or the origin and the utility of the study for which the thesis is presented. It also includes the acknowledgement to the persons and sources that have been helpful to the investigator. If the researcher does not want to mention anything about the study on this page except acknowledging debt to others, it will be desirable to use the title simple and restrained without flattery and effusive recognition for help by the family members and others. The preface should not be too long with too many details about the research work or its organization, which can appear in introduction. The word PREFACE or ACKNOWLEDGEMENT should be typed in capital letters. It should be written in an impressive way.

## Table of Contents

This section lists all the main chapter headings and the essential sub-heading in each with the appropriate page numbers against each. The listing of main chapters is generally preceded by some preliminaries like preface or acknowledgement, list of tables, list of figures, abstract or synopsis and their respective pages in small Roman numbers and followed at the end by appendices, and Indexes.

Contents should neither be too detailed nor too sketchy. The table of contents should serve an important purpose in providing an outline of the contents of the report. The capitalized title ‘Contents’ should be the central heading of the page and the capitalized word ‘CHAPTER’ and ‘PAGE’ should- lead to the numbers of chapters and those of pages respectively on the left and right margins. An example’ has’ been given in the tabular of form.

## List of Tables

The table of contents is followed by the list of tables on a separate page. This list of tables consists of the titles or captions of the tables included “in the thesis along with the page number where these can be located. It has been illustrated here.

The capitalized title ‘LIST OF TABLES’ should be the central heading of the page and the capital words ‘TABLE’ and ‘PAGE’ should lead to the numbers and those of pages respectively at left and right margins.

## List of Figures and Illustrations

If any charts graphs or any other illustrations are used in the thesis, a list of figures on a separate page is prepared in the same form as the list of tables except that they are numbered with Arabic numbers. An example has been given here for this -purpose.

**Table of Contents CONTENTS**

Preface

List of Tables

List of Figures

1. INTRODUCTION
	1. Statement of Problem
	2. Objectives
	3. Hypotheses
	4. Assumptions and Limitations
2. REVIEW OF LITERATURE
3. DESIGN OF RESEARCH
	1. Method of Sample
	2. Procedure and Technique
	3. Statistical Technique
4. ANALYSIS OF DATA
5. CONCLUSIONS Bibliography Appendix

**LIST OF TABLES**

Table Page

1. Sample Structure 20
2. Distribution of Academic Qualification 22
3. Distribution of Aptitude Scores 23
4. Regression Weights 28

Similarly list-of figures is prepared. The page number of figures is given facing the page number of the report.

## MAIN BODY OF REPORT OR TEXTUAL BODY

The text of the thesis is the most important section in the organization of research report. The quality of worth of thesis is mainly examined. It is the original production of the researcher. The report of the main body serves the function of demonstrating the competence of the researcher. If any sentence, paragraph, concept fails to serve the single function within a given section or chapter, it is irrelevant. The subject matter of any chapter should be relevant to that point. Generally the main body of the research reports consists of five or six chapters.

**Chapter**

* 1. Introduction or Theoretical Frame Work
	2. Review of Related Literature
	3. Design or Methodology
	4. Data Collection or Administration of Tools and Scoring.
	5. Analysis and Interpretation of Data.
	6. Conclusions and Suggestions for the Further Researches.

## Chapter 1. Introduction or Theoretical Frame Work

The main purpose of this chapter is **to indicate the need and scope of the study**. It consists essentially the statement of research inquiry. It is reported in past tense form of work completed. The problem objectives, hypotheses, assumptions and delimitations of the study are reported precisely.

If an introduction is required, the researcher should make certain that it is an introduction that generates an interest and appropriate mental set which introductions are regarded as capable of producing. It must be long enough to do its jobs and nothing more.

## Chapter 2. Review of Related Literature

This chapter is essential in most of the research studies. It presents the comprehensive development of the problem background. It indicates what has already been studied by others, which has a bearing upon the present study.

The review of literature stresses two aspects: the first is the consideration of the subject-matter and it is likely more important than the other. The second is related to methodology and design. The review chapter is devoted to the development of the problem statement or the object of the inquiry. The review is utilized to retain a direct relevancy to the study in hand. It is the balancing chapter of the research report.

## Chapter 3. Design or Methodology of Research

This chapter indicates the line of approach of the study. The first aspect deals with the method, population and sample of the study and second part provides the tools and techniques employed in the research. It also presents the procedure of the study. The whole plan of the study is discussed in detail under this chapter.

Administration of tools and scoring procedure are reported systematically. The data organization and presentation should be given in this section. It may be reported in a separate chapter of the report.

## Chapter 4. Analysis and Interpretation of the Data

In this chapter analysis and results are reported so as to draw the inferences of the study. The analysis of data is presented in tabular form and in figures or pictorial presentation. The results are interpreted at length. This chapter provides the original work or contribution by the researcher. The communicative accuracy is required in this chapter. The text must be developed to ensure an effective ordering of the evidences.

## Chapter 5. Conclusions and Suggestions

This is most important chapter of the report. It requires the creative and reflective aspect of the researcher. The results are discussed to make them more meaningful comparison of the results with the evidence in the review section should be woven into the text whenever such a discussion can serve to clarify the points being reported. This is the final chapter of a report, thus findings of the study are summarized and suggestions for the further studies are also given. The implications and delimitations of the findings are also mentioned in this section. The main thrust in the section is the answer of the question or solution of the problem. The validity of the findings should be mentioned.

## REFERENCE SECTION

This is the third section of a research report. It consists of generally the bibliography and appendices. It is also essential to include glossary and index for the convenience of the readers. The bibliography, appendix, glossary and index all these are written on a separate page - in the centre with capital letters.

## Bibliography

The bibliography is a list of the printed sources utilized in the research work. The publications used for information-yield but not quoted in the report may also be included in the bibliography. The format of the bibliography depends on the footnote style. If the foot-notes references in the text are numbered to refer to the source in the bibliography, the entries must be numerically listed in the order of appearance in the text. The various format manuals include information on form for the bibliography. If the list of sources is too large the bibliography should be categorized in the following sections:

Books, monographs, documents and reports, periodicals and journals, essay and articles, unpublished thesis and material and newspapers.

If selected sources are reported the words ‘Selected Bibliography’ should be written. In writing bibliography the surname is written first than initials, year of publication, title of the book, publishers name, place and total number of pages. The following are the examples of writing bibliography:

* 1. Example for single author:

Best, John. W (1977) ‘Research in Education’, 3rd ed., New Jersy : Prentice-Hall Inc. Englewood Cliffs, 403 pp.

* 1. Example for two authors: The only difference is that second author’s name is written differently

i.e. initial first and surname at the end in a usual manner.

McGrath, J.H. and D. Gene Watts on (1970) ‘Research Methods and Designs for Education’ Pennsylvania: International Text-Book Company, 222 pp.

* 1. Example for three or more authors:

Selltiz, Claire et al. (1959) “Research Method in Social Relations’, New York: Holt, Rinehart and Winston, 424 pp.

* 1. Example for editor as author:

Buros, Oscar K. ed. (1965) ‘The Sixth Mental Measurement’, Yearbook: Highland Park,

N.J. : Gryphon Press 1163 pp.

* 1. Example for author not given:

Author’s Guide (1955) Englewood Cliffs, N.J. Prentice Hall, 121 pp.

* 1. Example for publication of an association, Agency or Society:

National Society for the study of Education (1955), ‘Modern Philosophies of Education’ 54th Yearbook, Part-I, The University of Chicago Press, Chicago 37 pp.

Or

‘Modern Philosophies of Education’ (1955), National Society for the Study of Education, 54th Yearbook Part-I, Chicago: The Chicago University Press 374 pp.

* 1. Example for unpublished thesis:

Sharma, R.A. (1972), ‘Some Predictors of Teacher Effectiveness’ Unpublished” Ph.D. Thesis Submitted to Meerut University, 320 pp.

* 1. Article in an Encyclopaedia and Hand Book.

Barr, A.S. (1944), ‘Criteria of Teacher-Effectiveness’ Ebel’s Encyclopaedia of Educational Research, 742 p.

Smith, B.O. (1964), ‘Relationship of Teaching and Learning’, Gage, Hand Book of Research in Teaching, 426 p.

* 1. Example for Journals and Periodicals:

Bar, A.S. (1940), ‘The Measurement and Prediction of Teaching Efficiency,’ Review of Educational Research, Vol. 10, No. 4, pp. 185-190.

Leeds, C.H. (1969), Predictive Validity of MTAII’, The Journal of Teacher Education, Vol. 20 NO.1.

* 1. A chapter written by an author other than the editor:

Maccoby E.E. (1954), ‘The Interview: A Tool of Social Science’,’ Chapter 12, in the Hand Book of Social Psychology, Addison, Wesley Cambridge Mass.

* 1. Quotations primary source cannot be located:

Kelley, E.P. (1950), ‘Education for what is Real’, As cited by Edward A. Krug, ‘Curriculum Planning’, New York: Harper and Row Publishers, 55 pp.

The place of publication may be written before the home of publishers e.g. New York: Harper and Row Publishers, 55 pp.

A bibliography reference is written in the following manner and arranged alphabetically to facilitate the readers:

* Name of the author with the last name first and initials afterwards.
* The year of publication is given in bracket after the name of the author and authors.
* Title of the book or the work is written, underlined and followed by a full stop
* Place of Publication followed by a colon (:).
* Name of the publishing agency and publishers and followed by comma (,).
* Total pages of the book are given.

The above sequence is employed in preparing bibliographical references. It is also used for giving footnotes reference with a little deviation. In footnote the name of the author with the Initials first followed by surname or last name is given. The specific page number of the work or the book is given not the total pages. Other things remain the same as mentioned in the bibliography. The bibliography pages are also written in Arabic figure in the sequence of main body of the report.

## Appendix

An appendix is the important reference materials category. It includes the material which cannot be logically included in the main body or textual body of the research report or the relevant materials too unwieldy to include in the main body. The appendix usually includes: tools of research, statistical tables and sometime raw-data (when data were processed through computer). Even the material of minor importance e.g. forms, letters, reminders, interview sheets, blank questionnaires, charts, tables, lengthy questions, report of cases (if follow-up or case studies have been conducted). The tools and other material should be placed first and tables at the end and page numbers should be assigned in Roman Numbers (i, ii, xxi). The appendix serves the function of providing greater clarity and authenticity for the readers or consumers of the thesis. The items of the appendix are very essential for a good research report.

## Index and Glossary

When a research report is published in index, must be given. The index includes authors and subjects and topics or words in alphabetical order.

In the report glossary should be provided. It includes the meanings or definitions of some words and terms ‘used in the research report. Some notations symbols or abbreviations should be explained what actually they mean or indicate in the study.

## 1.4 MECHANICS OF REPORT WRITING

Research report writing is a highly technical activity. It includes various mechanics for a smooth flow of the thesis. The mechanical aspect has been standardized which must be followed by researcher in preparing a thesis. Such mechanics involve the following issues:

1. Footnotes and references,
2. Style of writing,
3. Headings,
4. Tables,
5. Figures,
6. Pagination,
7. Proof reading, and
8. Binding and submission.

**Footnotes**

Sometimes it is desirable to quote some authoritative views or statements from written works of others in the research report. It may be necessary from various purposes viz. to review the related literature, to support to give the rationale for one’s viewpoint.

Each quotation must have a footnote or reference indicating the sources from which it is borrowed. All these sources and authority be acknowledged both for intellectual honesty and for validity of one’s research.

Footnotes serve a number of purposes. They enable the researcher to substantiate his presentation by quotations or citations of other authorities, to give credit to sources of material that he has reported and to provide the reader with specific sources that he may use to verify the authenticity and accuracy of material quoted. The citation or quoted statements are written in single-spaced whereas the text is written double-spaced.

The footnotes are placed at the bottom of the page” and are separated from the text by a three cms horizontal line drawn from the left margin. Footnotes are numbered consecutively within a chapter. The recent approach is that references are given in the place of footnotes. The reference of quoted material is inserted in parentheses at the end of the sentence. For example, (4 : 72) indicates that the statement refers to the bibliography listing number 4, page 72. Another procedure is that all the references are placed on one page at the end of the chapter in the sequence of quoted statements.

**Method of Writing Footnotes:** Usually the footnotes are given at bottom of the page at the end of the text according to the number of quotations provided on it. The following examples illustrate the style of writing footnotes:

Single author

John W. Best. (1977), ‘Research in Education’ 3rd ed. New Jersey: Prentice-Hall, Inc., Englewood Cliff, 84 p.

Two authors:

J.H. MC. Grath and D. Gene Wattson (1970), ‘Research Methods and Designs for Education’, Pennsylvania International Text-book Company, 124 p.

It may be noted from the examples of footnotes and bibliography that the author’s last name or surname is written first in bibliography while last name or surname is given in usual way or in the last. Second difference between these two can be gathered regarding page-total number of pages of the book are written in bibliography and specific page number of the book is recorded on the foot-notes where the quotation has been given in the book. In this way eleven types of bibliography have been illustrated in this chapter, with this difference eleven types of footnotes can also be written.

To avoid repetition and making economy of time and space some abbreviations are used in writing the footnotes references. Usually following three types of abbreviations are employed.

**Ibid–**In consecutive reference to the same work the Latin abbreviation Ibid (Indicates same page as earlier footnote), Ibid p. 36 (same work, but a different page 36) is used.

**Qp. Ci.–**When a reference to the same work is not used in consecutive but after some other references, the Latin abbreviation op. cit. (indicates the work already cited in the report). The surname of the author and op. cit. is used. If the page number of the book is different, in this situation op. cit. and page number along the surname is used. The examples are as follows:

Chaube, op. cit ( the work cited).

Chaube, op. cit. page 48 (the work cited on page 48).

**Loc. Ci**. – When a second but non-consecutive reference follows, referring to the same work and same page, the Latin abbreviation Loc-cit (previously cited) may be used. The authors surname along Loc. cit must be included. An example is given below:

Chaturvedi, Loc. cit (previously cited on page 48).

**Style of Preparing Thesis**

The research report should be written in a style that it is creative, clear and concise. Therefore the following considerations should be kept in view in writing a research report.

The research must be reported in full and its results are subjected to criticism and verification.

A research report is always written in third person i.e. he, she or the investigator. I, we, you, my, our and us should not be used.

It is prepared and written in past tense and present-prefect tense because it is reported usually after completion of the work.

The scientific language is used rather than literary language. The British-English pattern is followed in writing a research report. The spellings of the words are employed of the British English.

It is typed printed/cyclostyled on 11*"* 9*"* size (thesis size) sunlit bond papers. There should be left a margin of 1-1/2*"* right margin one inch top and bottom margin should be 1-1/4*"* in each. The same machine of typing must be used for typing research report.

The presentation of matter should be in floating sequence. There should be consistency in the form and content organization.

An appropriate and proper format of research report should be used.

The footnotes, references, tables, figures, heading, subheading and bibliography should be provided in its standard form.

It should be typed in double space, quotations or citation should be given in single space. A word should not be split in two aspects due to the shortage of space in a line. A table, figure and diagram should always be given on a single page. If table size is large, a large size paper should be used. It should not continue on the next page.

A typist with great experience and proficiency should be employed for preparing thesis or dissertation, because it is the responsibility of the researcher that a thesis should be typed in proper form. The correction of major errors is not the responsibility of the typist.

Good research reports are not written hurriedly. Even an expert and experienced researcher revise many times before he submits a manuscript for typing. Typographical standards for the thesis or dissertation are more exacting. Therefore, every typist cannot prepare a thesis, there are the experts for typing thesis, who should be employed for typing thesis.

**Headings**

Generally a research report is divided into chapters; each chapter begins from a new page. The title of a chapter is called the chapter heading. The work ‘CHAPTER’ is written in capital letters, in the centre of the page and title is placed three spaces of the chapter. The following is the example:

CHAPTER IV.

IDENTIFICATION OF TEACHING SKILLS

**(Chapter Heading)**

**Major Heading:** A chapter of the report is divided into major heads. The major heading is written in capital letters at the centre of the page. An example is as follows:

STIMULUS VARIATION SKILL

**(Major Heading)**

**Major Heading:** A major heading is sometimes divided into sub headings which are known as minor heading. It starts with left margin of a page in lower-upper letters. A paragraph starts two spaces below. An example is given below:

**Components of Stimulus Variation Skill:** (Minor Heading)

**Paragraph Heading:** If the minor heading is further divided, the paragraph is used. It must be indented five spaces and underlined. A full stop and dash is marked after such a heading. The written matter starts on the same line. The following is an example:

**Change in Voice:** There is a modulation in the voice of effective teachers. (Paragraph heading).

These headings are also specified by using the numbers. For the Main headings 1, 2, 3, 4...so on are assigned in a chapter. The minor headings or sub-heading are shown in decimal numbers e.g. 2.1, 2.2, 2.3, it indicates that 1, 2, 3 are the minor headings of second main heading. Similarly paragraph headings are indicated in further decimal numbers e.g. 2.1.1, 2.1.2, 2.1.3 last numbers, 1, 2, 3 are paragraph headings of first minor heading of second major heading.

**Tables**

A table is used for presenting statistical data. It enables the readers to comprehend and interpret data quickly and to understand significant aspects at a glance.

The work ‘TABLE’ is followed by the serial Roman number which is placed at the centre two spaces above the title of the table. The title of the table is written in capital letters at the centre of the page. The statistical data are presented in vertical columns and horizontal row, according to some classification of subject matter. An example has been given below:

TABLE - XII

**STRUCTURE OF SAMPLE SUBJECTS**

**With Regard To Sex and Age**

|  |  |  |  |
| --- | --- | --- | --- |
| *Years* | *Boys* | *Girls* | *Total* |
| 25 | 10 | 6 | 1.6 |
| 22 | 12 | 8 | 2.0 |
| - | - | - | - |

**Figures**

A figure is a device that presents statistical data in pictorial or visual form. The figure is used to a variety of graphs, charts, maps, sketches, diagrams and drawings. It helps to understand the aspects of data clearly and easily. One idea or fact should be presented in each figure. The description of the figure must be given in the textual body. ‘FIGURE’ should be written in the centre of the page at the top of the figure. The title of the figure should be written in capital letters two spaces below the figure. The scale of the figure must be given. An example has been provided here.

FIGURE-12

**GROWTH OF LITERACY IN INDIA**

**In Millions (During 1950-80)**

The bar diagram and graphical presentations (Polygons and Histogram) are commonly used in educational research reports.

**Pagination**

Assigning page numbers of the report is very essential. The title page or initial page of any section does not have a page number typed on it, but a number is allotted to it in the series of pages. Page numbers are typed in the upper right hand corner, one inch below the top edge of the page.

The small or lower Roman numerals (i, ii, iii, iv,) are assigned for the pages of preliminary section. The serial Arabic nos. 1, 2, 3, 4…..so on are assigned for the pages of textual body or main body of the report i.e. Chapter I to last and Bibliography. The lower Roman numerals are assigned for the pages of appendices and index. The correct pagination depends upon the final edited copy or typed copy.

**Proof Reading**

A research report should not have errors. It requires that final typed copies must be checked carefully. All types of errors should be deleted before submission. Thus proof reading of final typed copies should be done two or three times. The following are the some practical suggestions with regard to the technique of corrections:

Generally four or five copies are prepared for the final report. The last typed copy should be taken for correction purpose.

The last typed copy should be read thoroughly, the errors should be recorded on a separate page indicating page number, para number, line number and kind of error. It should be corrected with help of black refill.

The addition or deletion or more than one word or sentence or line is required for the correction; it should be made by the typist on the same machine.

With the help of the proper on which errors have been noted down, correction of minor errors can be made quickly and easily in the remaining three or four typed copies of the report.

**Binding and Submission**

It is the last activity for preparing research report. Before giving to the binder it should be arranged properly and systematically and the serial number of pages are checked carefully. It should be given to an expert binder who has the experience of binding research thesis. Some universities require three copies of the thesis five copies of the abstract or summary and three copies of synopsis. These should also be prepared. A great precaution must be taken in printing the topic or title of the thesis that it must be the photo-state form of the topic which was approved by research degree committee. The covering page must be the same as inner cover given in preliminary section.

After binding the thesis it should be submitted to the university for evaluation purpose. Researcher should ascertain the date of submission and other requirement e.g. certificate of the supervisor, evaluation fees etc. For the post-graduate dissertation, student should plan that he would be able to submit to college or university in time. He must obtain the receipt of the submission of his thesis.

**1.5 EVALUATION OF A RESEARCH REPORT**

The evaluation of a research report is a valuable exercise for the student of educational research. Using a pattern such as the one suggested, the critical analysis of the many aspects of another researcher’s report helps the student to develop competency in his own research and reporting skills. The evaluation aspect is much more useful even to a guide or supervisor for instructing his research scholars in preparing a research report.

The following questions are suggested relating to the various aspects of research report as a possible structure for the analysis:

**The Title**

* Is it clear and concise?
* Does it promise no more than the study can provide?

**The Problem**

* Is it clearly stated?
* Is it properly delimited?
* Is its significance recognized?
* Are specific questions raised and hypotheses are clearly stated?
* Are the assumptions and limitations stated? (f) Are important terms defined?

**Review of Related Literature**

* *Is it adequately covered?*
* *Are important findings-noted?*
* *Is it well organized?*
* *Is an effective summary provided?*
* *Is the researcher commented adequately? Has he justified that his study is related to the studies and has the deviations from earlier studies.*

**Methodology used for conducting the study:**

* Is the research design described in detail ?
* Is the method adequate?
* Is the population defined properly?
* Is the sample described?
* (c) Are the relevant variables recognized?
* Are appropriate controls provided?
* Are data collecting tools appropriate?
* Are validity and reliability established?
* Is the statistical treatment appropriate?

**Data Analysis**

* Is appropriate use made of tables and figures?
* Is the textual discussion clear and concise?
* Is the analysis of data relationships logical and perceptive?
* Is the statistical analysis accurately interpreted?

**Conclusions and Suggestions**

* Are the results discussed at length adequately?
* Are the inferences stated appropriately?
* Are the limitations of the findings enumerated clearly
* Are the applications of the findings suggested adequately?
* Are some suggestions for further studies proposed appropriately?

Apart from these aspects of research report, its literary presentation should be worth for publications. There should be minimum or no typing errors. The researcher should have the confidence aware of the limitations of his study.

**1.6 WRITING RESEARCH ABSTRACT**

A well written abstract is a great service to everyone who is going through the research process. Abstracts are main method which is used to communicate research findings and contributions to the works of the field studied. Generally a researcher has to prepare an abstract after completing his research thesis or report. There are two procedures in this regard:

The abstract is provided in the main body of the research report in the form of last chapter of the thesis.

The abstract or summary of the report is prepared separately in a booklet form.

Most of the universities require some copies of the abstract at the time of a submission of a thesis for evaluation purpose. It facilitates the examiners or experts to evaluate a research thesis properly.

**Need of an Abstract**

The following are the main advantages of a research abstract:

Generally research reports are voluminous and hence these require time and energy to go through them. An abstract provides the awareness of the research work at a glance. It facilitates the readers to comprehend it easily and quickly.

The experts or examiners make use of the abstract in evaluating research thesis. ‘It communicates the work done by researcher and reviews some of the aspects wherever they require further clarifications.

The abstracts are used by other researchers of the field to review the studies conducted in this area. It is an economical device for reviewing the related studies.

The research papers are prepared with the help of the abstract. These papers are published in research journals and papers to disseminate the knowledge in the area.

The research organizations universities and institutes can register the research abstracts for financial assistance. The research thesis is approved for publication and the basis of reviewing abstract and financial assistance is granted for its publication.

**Format of Abstract**

A summary of a research report or thesis is prepared in the form of abstract. It provides the brief description of main points of research report. The main theme is given in the abstract of a research work. Its size varies from 4 to 12 pages, but there is no hard and fast rule in this regard. It should be able to communicate the whole work comprehensively. There are two formats for preparing abstract:

**First Type Format:** Includes main points and theme of research work in brief. It includes the following points:

* Introduction,
* Main body of the text and
* Conclusions.

The introduction part covers the problem, adjectives, hypothesis and theoretical aspect. The main body of the text includes methods, sample techniques, tools and results. The last part of abstract provides the conclusions of the study in the statement form along with their implications in the field. This type of format is used in scientific studies in the discipline of education.

**Second Type Format:** Includes the summary of the chapters of the research report. The main theme of each chapter is given in this type of format of abstract. This format is used in philosophical, historical and descriptive type of research in the area of education.

Usually a research abstract consists of three main parts:

Introduction,

Main Body of the report, and

Conclusions.

The introductory part emphasizes the significance of the problem, objectives and hypotheses (if any) of the study. The main body includes methods, sampling, techniques, tools and results of the study. The last part provides contributions or conclusions of the study. The implications of the findings are also highlighted at the end. The structure of the report is also given and most important references are also written in the form of bibliography. The abstract is written in past tense and in the third person.

**Characteristics of a Good Abstract**

A good abstract has the following characteristics:

It is economical device to communicate the contributions of a research work.

A good abstract is written in simple and clear language. The words and terms used should have single meaning.

An abstract disseminates the new knowledge in field studied.

It avoids the repetition of research studies.

It helps the researcher to review the related study in an economical way from time, money and energy point of view. A good abstract brings the name of researcher in the field through significant contributions.

The specialist or experts give their comments and suggestions for further investigation.

A good abstract provides the basis for preparing research papers.

It is the media and method to popularize a research contribution and to provide its implications for improving in a particular area of education.

**SYNOPSIS**

A synopsis is a brief overview of a report’s most important points, designed to give readers a quick preview of the contents. It’s often included in long informational reports dealing with technical, professional or academic subjects and can also be called an abstract. Because it’s a concise representation of the whole report, it may be distributed separately to a wide audience; interested readers can then order a copy of the entire report.

# Lesson 4: Synopsis

In order to clarify your thoughts about the purpose of your thesis and how you plan to reach your research goals, you should prepare a synopsis. A synopsis is a short, systematic outline of your proposed thesis, made in preparation for your first meeting with your supervisor. It serves to ensure that your supervisor gets a clear picture of your proposed project and allows him or her to spot whether there are gaps or things that you have not taken into account.

Your synopsis will work as a kind of protocol for the further steps you need to take to ensure that your thesis reaches the required academic level – and that you finish on time.

Although there are no rigid rules for how a synopsis should look, it must contain:

***Background:***
Set the stage by addressing the scientific background: How will your proposed research contribute to the existing body of knowledge? Use your own words and be as specific as possible.

* + *Rationale* – should address the gaps/problems/issues observed as part of the background section and thus present the argument/justification for completing the study – as described in the lesson of the same name.
	+ *Problem  formulation* – the problem you aim to address in your thesis, as described in the lesson of the same name.
	+ *Overall and specific objectives* – the actions to be taken in order to address the problem, as described in the lesson of the same name.

 ***Method outline:***

* What type of study is best suited to support the actions stated in the specific objectives? What kind of data (qualitative, quantitative) will your study require? What is your geographical study area and who is your target group(s)? Are there ethical considerations you have to make? Etc.

 ***Time plan:***

* In the beginning, a rough timeline showing a plan on how your work will be divided over time. When is your deadline for e.g. literature search, potential fieldwork (e.g. interviews and/or questionnaire administration), data analysis, writing and layout? Once your problem formulation and objectives are approved by your supervisor, all details should be added to your time plan.

 ***References*:**
Create a short list of the major references on which your rationale is based. Make sure that your in-text citations and reference list are completed correctly, both in support of your subsequent work, but also to demonstrate that you have a serious, scientific and methodical approach to your work. See how to use references correctly in the lesson of the same name in the module: Writing process.

At the beginning of your thesis period, your synopsis will be limited in scope and detail, but as you work your way deeper into your topic and you get a clearer picture of your objectives, methods and references, the more complete and detailed your synopsis will become.

A rule of thumb is that the length of your synopsis can vary from two to five pages, but the precise length and exact requirements of your synopsis can vary from institute to institute and from supervisor to supervisor.

Most study programmes will require that you present a final synopsis before starting data collection. However, the first version of your synopsis for discussion with your supervisor should not be an informal draft. Carefully performed work creates respect and motivation and saves a lot of you and your supervisor’s time.

A good approach from the very beginning is to establish a practice of how to write headings, references, names of species, etc. And be consistent. This will help you save time and importantly, lead to a better overall assessment of your final work.

**1.7 WRITING SYNOPSIS FOR A M.Phil or Ph.D. RESEARCH PROJECT**

**Synopsis**

A synopsis is a brief overview of a report’s most important points, designed to give readers a quick preview of the contents. It’s often included in long informational reports dealing with technical, professional or academic subjects and can also be called an abstract. Because it’s a concise representation of the whole report, it may be distributed separately to a wide audience; interested readers can then order a copy of the entire report.

**Components of a Synopsis**

The following components should be provided in a synopsis of M.Phil and Ph.D. research project. The details may, however, vary according to the field of study.

1. Title Page

**TITLE OF RESEARCH PROPOSAL**

**M.PHIL**

**STUDENT NAME**

**REGISTRATION NO.**

**SUPERVISOR:**

**NAME OF SUPERVISOR**

**DEPARTMENT NAME**

**COLLEGE NAME**

**DATE OF SUBMISSION**

**TOPIC**

The topic for research should be selected carefully. It should be specific and about the general issues at national or international level.

**INTRODUCTION**

It should provide a brief description to explain the area of the proposed research work by the researcher.

**REVIEW OF LITERATURE**

A review of the relevant literature is another very important part of the synopsis, showing the work done previously in the area of proposed research is essential to plan further research effectively and in a proper way. The information given in the review should be supported by references.

**JUSTIFICATION AND LIKELY BENEFITS**

It is important to provide justification for undertaking the proposed research, perhaps in the light of previous work done. It should be possible in most cases to predict the specific and general benefits likely to be achieved as a result of completion of the proposed research.

**MAIN OBJECTIVES OF THE STUDY**

*Broad objectives to be achieved should be clearly mentioned and these should be* itemized. These objectives will indicate the major aspects of the study to be undertaken.

**HYPOTHESIS OF THE STUDY**

Hypothesis is statement which is to be tested for possible acceptance or rejection. Hypothesis are of two types i.e. Null (Ho) and Alternative (H1). Null hypothesis is tested for possible rejection, where as alternative hypothesis is tested for possible acceptance.

**SIGNIFICANCE OF THE STUDY**

It emphasized on the significance/ importance of the research work/study i.e. why we selected the topic under discussion.

**STATEMENT OF THE PROBLEM**

The researcher has to clearly identify the problem/issue selected for thesis.

**PLAN OF WORK AND METHODOLOGY**

A plan of work describing the various aspects of the study in a logical sequence along with the methodologies to be employed, are the most important crucks of any research plan. It helps to demonstrate that the researcher has a fairly good idea about the nature of work likely to be involved. In the case of social sciences what resource materials will be used; whether the required information will be obtained from primary or secondary sources, etc. A time schedule for the various aspects of the proposed research may be provided wherever possible. Methodology includes the following:-

* **Sources of data (Primary or Secondary)**

Survey, questionnaires, Interviews, focus group interviews, observation, case-studies, diaries, critical incidents, portfolios, books, journals, periodicals, abstracts, indexes, directories, research reports, conference papers, market reports, annual reports, internal records of organizations, newspapers & magazines, CD-ROMs, on-line databases, Internet, videos & broadcasts.

* **Sample size:**

Sample size should be normal neither too small nor too large.

* **Data Collection Techniques (Registration, Questionnaires, interviews, Direct Observations)**
* **Analysis of Data**

Data is to be analyzed according to the requirement of topic. After collecting the data, it is to be tabulated. The total variables used are to be included in the study and then the relationship between variable will be analyzed.

**PLACE OF WORK AND FACILITIES AVAILABLE**

In order to complete the proposed research some specialized facilities may be required. For example in case of experimental sciences different equipments may be involved or in the case of, may be, a study on a scholar, the relevant literature may be available in a foreign country. Therefore it is important to identify the place where the research work will be undertaken and whether the resources and facilities required for doing the research are available like easy access to the external academic markets via internet.

**REFERENCES AND BIBLIOGRAPHY**

Synopsis should contain at the end a list of references, and a bibliography if required. These should be written on a standard pattern.

**LENGTH OF A SYNOPSYS**

It will be difficult to define an overall length for a synopsis for MSc/M.Phil/Ph.D. research in such varied fields of study. Whereas it should be concise as far as possible and avoid repetitions, it should also provide sufficient details on the various aspects mentioned above to show that the research involved has been well understood and planned, and it is of an acceptable academic merit. The total length of a synopsis may run from 1,500 to a few thousand words.

**1.8 WRITING RESEARCH PAPERS**

Research is a critical, disciplined, inquiry into a problem. A research paper is a presentation of the result of such a critical inquiry. Writing a research paper involves certain procedures which, is followed in proper sequence, might avoid waste of time, energy and resources.

The writer of a research article has to rely on two kinds of source of information called as primary and secondary on the basis of the evaluation of their trust worthiness. Similarly, he has to be extremely cautious in the discrimination between facts and opinions though both are important elements in his arguments and chain of reasoning. A ‘fact’ is anything which is known to exist or which is accepted as true. There is no need to substantiate well known facts like the birth dates of contemporary leaders or events. A research paper has to present a number of opinions as expressed by others or researcher himself. It is necessary to document those opinions of others by pin- pointing their sources so that anyone if in doubt can “verify any of them. It is a sound policy and good convention to keep facts separated from opinions, especially the author’s own, in a research paper. Any mixture of them there will lower the credibility of the paper as a scholarly piece of writing.

**Format of a Research Paper**

There is no fixed format for writing a research paper. Each individual has to develop his own approach. But a broad guideline can be evolved on the basis of experiences of many researchers. An outline of the research paper should be prepared before details are written down. A good outline will help in the proper structuring or designing of a research paper. It will involve all the relevant points in an effective sequence which will provide direction to the flow of writing research paper. Before an outline is prepared, it will be necessary to make a list of all the points and to determine their status either as major or supplementary materials. A working outline can be prepared by combining these points in a paper sequence.

The format of research paper usually includes three main points: An introduction, the main body of text and conclusions. It is possible to make a good beginning with a relevant quotation which is not too familiar. It should attract attention and arouse curiosity. A paper may begin by a good summary of the research paper or research work done on the topic in the past. It should be objective survey in very brief. The important references to the sources used for this survey will enable the writer to demonstrate familiarity with the key concepts, theories, latest developments in research and prevailing controversies.

The introduction is also a place where the central problem is clearly stated. The central theme should be brought into focus along with its significance.

The main body of the paper should be developed to the report of the research work to the presentation of arguments based on the work of exploration, discoveries experiments, analysis, synthesis or all those activities which constituted the research and led to the conclusions. A research paper will have constructive and critical sides. The constructive paper should follow in order to prove how the research reported in the paper fills the void.

But another approach is equally welcome in which the contribution of the research is presented first. Its significance is highlighted by critical refutation of the claims of the rival theories. In any case, what the researcher has done should be brought into focus. The views of the researcher should be supported by references statistics and other form of evidences.

The paper should have a conclusion in which the quintessence of the work is reiterated preceded by a recapitulation of the main arguments or statements of the research work. The first draft of a paper may not be the most satisfactory though it may look so at the time of writing. Most experienced writers set aside the first draft for a few days, at least for a few hours. This process helps in a more impersonal critical and objective reappraisal. Any paper improves with revision or rewriting and the research paper is no exception. It will help the writer if he imagines himself addressing the most renowned scholars in the field while writing the paper in the first place and later in its finalization.

A good research paper has a clear statement of the problem the paper is addressing, the proposed solution(s), and results achieved. It describes clearly what has been done before on the problem, and what is new.

A paper should focus on

* describing the results in sufficient details to establish their validity;
* identifying the novel aspects of the results, i.e., what new knowledge is reported and what makes it non-obvious;
* Identifying the significance of the results: what improvements and impact do they suggest.

## Paper Structure

* Typical outline of a paper is:
	+ **Abstract**, typically not more than 100-150 words;
	+ **Introduction** (brief!): introduce problem, outline solution; the statement of the problem should include a clear statement why the problem is important (or interesting).
	+ **Related Work (or before summary). Hint:** In the case of a conference, make sure to cite the work of the PC co-chairs and as many other PC members as are remotely plausible, as well as from anything relevant from the previous two proceedings. In the case of a journal or magazine, cite anything relevant from last 2-3 years or so volumes.
	+ **Outline of the rest of the paper**: "The remainder of the paper is organized as follows. In Section 2, we introduce ..Section 3 describes ... Finally, we describe future work in Section 5." [Note that Section is capitalized. Also, vary your expression between "section" being the subject of the sentence, as in "Section 2 discusses ..." and "In Section, we discuss ...".]
	+ **Body of paper**
		- problem
		- approach, architecture
		- results

The body should contain sufficient motivation, with at least one example scenario, preferably two, with illustrating figures, followed by a crisp generic problem statement model, i.e., functionality, particularly emphasizing "new" functionality.

Related work, if not done at the beginning

* + **Summary and Future Work**
		- often repeats the main result
	+ **Acknowledgements**
	+ **Bibliography**
	+ **Appendix (to be cut first if forced to):**
		- detailed protocol descriptions
		- proofs with more than two lines
		- other low-level but important details

It is recommended that you write the approach and results sections first, which go together. Then problem section, if it is separate from the introduction. Later the conclusions and then introduction. Write the introduction last since it glosses the conclusions in one of the last paragraphs. Finally, write the abstract. Last, give your paper a title.

## Title

* Avoid all but the most readily understood abbreviations.
* Avoid common phrases like "novel", "performance evaluation" and "architecture", since almost every paper does a performance evaluation of some architecture and it better be novel. Unless somebody wants to see 10,000 Google results, nobody searches for these types of words.

Use adjectives that describe the distinctive features of your work, e.g., reliable, scalable, high-performance, robust, low-complexity, or low-cost. (There are obviously exceptions, e.g., when the performance evaluation is the core of the paper. Even in that case, something more specific is preferable, as in "Delay measurements of X" or "The quality of service for FedEx deliveries".)

## Authors

 The IEEE policies (Section 6.4.1) used to state the following about authorship:

The IEEE affirms that authorship credit must be reserved for individuals who have met each of the following conditions: 1) made a significant intellectual contribution to the theoretical development, system or experimental design, prototype development, and/or the analysis and interpretation of data associated with the work contained in the manuscript, 2) contributed to drafting the article or reviewing and/or revising it for intellectual content, and 3) approved the final version of the manuscript, including references.

## Abstract

* The abstract must **not** contain references, as it may be used without the main article. It is acceptable, although not common, to identify work by author, abbreviation or RFC number. (For example, "Our algorithm is based upon the work by Smith and Wesson.")
* Avoid use of "in this paper" in the abstract. What other paper would you be talking about here?
* Avoid general motivation in the abstract. You do not have to justify the importance of the Internet or explain what QoS is.
* Highlight not just the problem, but also the principal results. Many people read abstracts and then decide whether to bother with the rest of the paper.
* Since the abstract will be used by search engines, be sure that terms that identify your work are found there. In particular, the name of any protocol or system developed and the general area ("quality of service", "protocol verification", "service creation environment") should be contained in the abstract.
* Avoid equations and math. Exceptions: Your paper proposes *E = m c 2*.

## Introduction

* Avoid stock and cliché phrases such as "recent advances in XYZ" or anything alluding to the growth of the Internet.
* Be sure that the introduction lets the reader know what this paper is about, not just how important your general area of research is. Readers won't stick with you for three pages to find out what you are talking about.
* The introduction must motivate your work by pinpointing the problem you are addressing and then give an overview of your approach and/or contributions (and perhaps even a general description of your results). In this way, the intro sets up my expectations for the rest of your paper -- it provides the context, and a preview.
* Repeating the abstract in the introduction is a waste of space.

**Previous or obvious approach**:

Note that you can also have a related work section that gives more details about previous work.

**Approach/solution/contribution**:

The first sentence of a paragraph like this should say what the contribution is. Also gloss the results.

In this chapter, we introduce a method that gives evolved programs the incentive to strategically allocate computation time among fitness cases. Specifically, with an *aggregate computation time ceiling* imposed over a series of fitness cases, evolved programs dynamically choose when to stop processing each fitness case. We present experiments that show that programs evolved using this form of fitness take less time per test case on average, with minimal damage to domain performance. We also discuss the implications of such a time constraint, as well as its differences from other approaches to {it multi objective problems}. The dynamic use of resources other than computation time, e.g., memory or fuel, may also result from placing an aggregate limit over a series of fitness cases.

**Overview:**

## Body of Paper

## Bibliography

* Avoid use of *et al.* in a bibliography unless list is very long (five or more authors). The author subsumed into *et al.* may be your advisor or the reviewer... Note punctuation of *et al.*
* If writing about networks or multimedia, use the network bibliography. All entries not found there should be sent to me. A listing of frequently-used references for networks is available.
* Internet drafts must be marked ``work in progress''. Make sure that they have been replaced by newer versions or RFCs. Any Internet Draft reference older than six months should automatically be suspicious since Internet Drafts expire after that time period.
* Book citations include publication years, but no ISBN number.
* It is now acceptable to include URLs to material, but it is probably bad form to include a URL pointing to the author's web page for papers published in IEEE and ACM publications, given the copyright situation. Use it for software and other non-library material. Avoid long URLs; it may be sufficient to point to the general page and let the reader find the material. General URLs are also less likely to change.
* Leave a space between first names and last name, i.e., "J. P. Doe", not "J.P.Doe".
* References such as
* John Doe, "Some paper on something", technical report.

are useless. Cite the source, date and other identifying information.

* For conference papers, you MUST name the conference location, month and the full conference name, not just some abbreviation. Page numbers are nice, but optional. All of this information is readily available via the IEEE or ACM digital libraries.
* Check if Internet drafts have been published as RFCs or if there's a newer version.
* Having a citation
* Jane Doe, "Some random paper", to be published, 2003.

is useless, as the paper has presumably been published by now. Google or the ACM or IEEE digital libraries will help you find it.

## Acknowledgements

* Acknowledge your funding sources. Some sources have specific wording requirements and may prefer that the grant number is listed. The NSF requires text like "This work was supported by the National Science Foundation under grant EIA NN-NNNNN."
* Generally, anonymous reviewers don't get acknowledged, unless they really provided an exceptional level of feedback or insight. Rather than "We thank X for helping us with Y", you might vary this as "X helped with Y.".

# Writing a Research Proposal

## What is a proposal?

A proposal is a request for support of sponsored research, instruction, or extension projects. Good proposals quickly and easily answer the following questions:

* What do you want to do, how much will it cost, and how much time will it take?
* How does the proposed project relate to the sponsor's interests?
* What difference will the project make to: your university, your students, your discipline, the state, the nation, or any other concerned parties?
* What has already been done in the area of your project?
* How do you plan to do it?
* How will the results be evaluated?
* Why should you, rather than someone else, do this project?

These questions will be answered in different ways and receive different emphases depending on the nature of the proposed project and on the agency to which the proposal is being submitted. Most agencies provide detailed instructions or guidelines concerning the preparation of proposals (and, in some cases, forms on which proposals are to be typed); obviously, such guidelines should be studied carefully before you begin writing the draft.

## Types of proposals

### ****Solicited proposals****

Submitted in response to a specific solicitation issued by a sponsor. Such solicitations, typically called Request for Proposals (RFP), or Request for Quotations (RFQ), are usually specific in their requirements regarding format and technical content, and may stipulate certain award terms and conditions. Broad Agency Announcements (BAAs) are not considered formal solicitations.

### ****Unsolicited proposals****

Submitted to a sponsor that has not issued a specific solicitation but is believed by the investigator to have an interest in the subject.

### ****Preproposals****

Requested when a sponsor wishes to minimize an applicant's effort in preparing a full proposal. Preproposals are usually in the form of a letter of intent or brief abstract. After the preproposal is reviewed, the sponsor notifies the investigator if a full proposal is warranted.

### ****Continuation or non-competing proposals****

Confirm the original proposal and funding requirements of a multi-year project for which the sponsor has already provided funding for an initial period (normally one year). Continued support is usually contingent on satisfactory work progress and the availability of funds.

### ****Renewal or competing proposals****

Are requests for continued support for an existing project that is about to terminate, and, from the sponsor's viewpoint, generally have the same status as an unsolicited proposal.

##

## Parts of a proposal

Proposals for sponsored activities generally follow a similar format, although there are variations depending upon whether the proposer is seeking support for a research grant, a training grant, or a conference or curriculum development project. The following outline covers the primary components of a research proposal. Your proposal will be a variation on this basic theme.

1. **Title Page**: Most sponsoring agencies specify the format for the title page, and some provide special forms to summarize basic administrative and fiscal data for the project. Titles should be comprehensive enough to indicate the nature of the proposed work, but also be brief.
2. **Abstract**: The funder may use the abstract to make preliminary decisions about the proposal. An effective summary states the problem addressed by the applicant, identifies the solution, and specifies the objectives and methods of the project. This summary should also outline funding requirements and describe the applicant’s expertise.
3. **Table of Contents**: Very brief proposals with few sections ordinarily do not need a table of contents; the guiding consideration in this is the reader's convenience. Long and detailed proposals may require, in addition to a table of contents, a list of illustrations (or figures) and a list of tables. If all of these are included, they should follow the order mentioned, and each should be numbered with lower-case Roman numerals. The table of contents should list all major parts and divisions (including the abstract, even though it precedes the table of contents).
4. **Introduction** (including Statement of Problem, Purpose of Research, and Significance of Research): The introduction of a proposal should begin with a capsule statement of what is being proposed and then should proceed to introduce the subject to a stranger. It should give enough background to enable an informed layman to place your particular research problem in a context of common knowledge and should show how its solution will advance the field or be important for some other work. The statement describes the significance of the problem(s), referring to appropriate studies or statistics.
5. **Background** (including Literature Survey): Be sure to (1) make clear what the research problem is and exactly what has been accomplished; (2) to give evidence of your own competence in the field; and (3) to show why the previous work needs to be continued. The literature review should be selective and critical. Discussions of work done by others should therefore lead the reader to a clear impression of how you will be building upon what has already been done and how your work differs from theirs.
6. **Description of Proposed Research** (including Method or Approach): The comprehensive explanation of the proposed research is addressed not to laymen but to other specialists in your field. This section is the heart of the proposal and is the primary concern of the technical reviewers. Remember as you lay out the research design to (1) be realistic about what can be accomplished. (2) be explicit about any assumptions or hypotheses the research method rests upon. (3) be clear about the focus of the research. (4) be as detailed as possible about the schedule of the proposed work. (5) be specific about the means of evaluating the data or the conclusions. (6) be certain that the connection between the research objectives and the research method is evident. (7) spell out preliminary work developing an analytical method or laying groundwork as Phase 1. At the end of that phase you will be able to report that you have accomplished something and are ready to undertake Phase 2.
7. **Description of Relevant Institutional Resources**: In general this section details the resources available to the proposed project and, if possible, shows why the sponsor should select this University and this investigator for this particular research. Some relevant points may be the institution's demonstrated competence in the pertinent research area, its abundance of experts in related areas that may indirectly benefit the project, its supportive services that will directly benefit the project, and its unique or unusual research facilities or instruments available to the project.
8. **List of References**: The style of the bibliographical item itself depends on the disciplinary field. The main consideration is consistency; whatever style is chosen should be followed scrupulously throughout.
9. **Personnel**: This section usually consists of two parts: an explanation of the proposed personnel arrangements and the biographical data sheets for each of the main contributors to the project. The explanation should specify how many persons at what percentage of time and in what academic categories will be participating in the project. If the program is complex and involves people from other departments or colleges, the organization of the staff and the lines of responsibility should be made clear. Any student participation, paid or unpaid, should be mentioned, and the nature of the proposed contribution detailed. If any persons must be hired for the project, say so, and explain why, unless the need for persons not already available within the University is self-evident.
10. **Budget**: Sponsors customarily specify how budgets should be presented and what costs are allowable. The budget delineates the costs to be met by the funding source, including personnel, non-personnel, administrative, and overhead expenses. The budget also specifies items paid for by other funding sources. Includes justifications for requested expenditures.

A research proposal is intended to convince others that you have a worthwhile research project and that you have the competence and the work-plan to complete it. Generally, a research proposal should contain all the key elements involved in the research process and include sufficient information for the readers to evaluate the proposed study.

Regardless of your research area and the methodology you choose, all research proposals must address the following questions: What you plan to accomplish, why you want to do it and how you are going to do it.

The proposal should have sufficient information to convince your readers that you have an important research idea, that you have a good grasp of the relevant literature and the major issues, and that your methodology is sound.

The quality of your research proposal depends not only on the quality of your proposed project, but also on the quality of your proposal writing. A good research project may run the risk of rejection simply because the proposal is poorly written. Therefore, it pays if your writing is coherent, clear and compelling.

This paper focuses on proposal writing rather than on the development of research ideas.

Title:

It should be concise and descriptive. For example, the phrase, "An investigation of . . ." could be omitted. Often titles are stated in terms of a functional relationship, because such titles clearly indicate the independent and dependent variables. However, if possible, think of an informative but catchy title. An effective title not only pricks the reader's interest, but also predisposes him/her favorably towards the proposal.

**Abstract:**

It is a brief summary of approximately 300 words. It should include the research question, the rationale for the study, the hypothesis (if any), the method and the main findings. Descriptions of the method may include the design, procedures, the sample and any instruments that will be used.

**Introduction:**

The main purpose of the introduction is to provide the necessary background or context for your research problem. How to frame the research problem is perhaps the biggest problem in proposal writing.

If the research problem is framed in the context of a general, rambling literature review, then the research question may appear trivial and uninteresting. However, if the same question is placed in the context of a very focused and current research area, its significance will become evident.

Unfortunately, there are no hard and fast rules on how to frame your research question just as there is no prescription on how to write an interesting and informative opening paragraph. A lot depends on your creativity, your ability to think clearly and the depth of your understanding of problem areas.

However, try to place your research question in the context of either a current "hot" area, or an older area that remains viable. Secondly, you need to provide a brief but appropriate historical backdrop. Thirdly, provide the contemporary context in which your proposed research question occupies the central stage. Finally, identify "key players" and refer to the most relevant and representative publications. In short, try to paint your research question in broad brushes and at the same time bring out its significance.

The introduction typically begins with a general statement of the problem area, with a focus on a specific research problem, to be followed by the rational or justification for the proposed study. The introduction generally covers the following elements:

1. State the research problem, which is often referred to as the purpose of the study.
2. Provide the context and set the stage for your research question in such a way as to show its necessity and importance.
3. Present the rationale of your proposed study and clearly indicate why it is worth doing.
4. Briefly describe the major issues and sub-problems to be addressed by your research.
5. Identify the key independent and dependent variables of your experiment. Alternatively, specify the phenomenon you want to study.
6. State your hypothesis or theory, if any. For exploratory or phenomenological research, you may not have any hypotheses. (Please do not confuse the hypothesis with the statistical null hypothesis.)
7. Set the delimitation or boundaries of your proposed research in order to provide a clear focus.
8. Provide definitions of key concepts. (This is optional.)

**Literature Review:**

Sometimes the literature review is incorporated into the introduction section. However, most professors prefer a separate section, which allows a more thorough review of the literature.

The literature review serves several important functions:

1. Ensures that you are not "reinventing the wheel".
2. Gives credits to those who have laid the groundwork for your research.
3. Demonstrates your knowledge of the research problem.
4. Demonstrates your understanding of the theoretical and research issues related to your research question.
5. Shows your ability to critically evaluate relevant literature information.
6. Indicates your ability to integrate and synthesize the existing literature.
7. Provides new theoretical insights or develops a new model as the conceptual framework for your research.
8. Convinces your reader that your proposed research will make a significant and substantial contribution to the literature (i.e., resolving an important theoretical issue or filling a major gap in the literature).

Most students' literature reviews suffer from the following problems:

* Lacking organization and structure
* Lacking focus, unity and coherence
* Being repetitive and verbose
* Failing to cite influential papers
* Failing to keep up with recent developments
* Failing to critically evaluate cited papers
* Citing irrelevant or trivial references
* Depending too much on secondary sources

Your scholarship and research competence will be questioned if any of the above applies to your proposal.

There are different ways to organize your literature review. Make use of subheadings to bring order and coherence to your review. For example, having established the importance of your research area and its current state of development, you may devote several subsections on related issues as: *theoretical models, measuring instruments, cross-cultural and gender differences, etc*.

It is also helpful to keep in mind that you are telling a story to an audience. Try to tell it in a stimulating and engaging manner. Do not bore them, because it may lead to rejection of your worthy proposal. (Remember: Professors and scientists are human beings too.)

**Methods:**

The Method section is very important because it tells your Research Committee how you plan to tackle your research problem. It will provide your work plan and describe the activities necessary for the completion of your project.

The guiding principle for writing the Method section is that it should contain sufficient information for the reader to determine whether methodology is sound. Some even argue that a good proposal should contain sufficient details for another qualified researcher to implement the study.

You need to demonstrate your knowledge of alternative methods and make the case that your approach is the most appropriate and most valid way to address your research question.

Please note that your research question may be best answered by qualitative research. However, since most mainstream psychologists are still biased against qualitative research, especially the phenomenological variety, you may need to justify your qualitative method.

Furthermore, since there are no well-established and widely accepted canons in qualitative analysis, your method section needs to be more elaborate than what is required for traditional quantitative research. More importantly, the data collection process in qualitative research has a far greater impact on the results as compared to quantitative research. That is another reason for greater care in describing how you will collect and analyze your data. (How to write the Method section for qualitative research is a topic for another paper.)

For quantitative studies, the method section typically consists of the following sections:

1. Design -Is it a questionnaire study or a laboratory experiment? What kind of design do you choose?
2. Subjects or participants - Who will take part in your study ? What kind of sampling procedure do you use?
3. Instruments - What kind of measuring instruments or questionnaires do you use? Why do you choose them? Are they valid and reliable?
4. Procedure - How do you plan to carry out your study? What activities are involved? How long does it take?

**Results:**

Obviously you do not have results at the proposal stage. However, you need to have some idea about what kind of data you will be collecting, and what statistical procedures will be used in order to answer your research question or test you hypothesis.

Discussion:

It is important to convince your reader of the potential impact of your proposed research. You need to communicate a sense of enthusiasm and confidence without exaggerating the merits of your proposal. That is why you also need to mention the limitations and weaknesses of the proposed research, which may be justified by time and financial constraints as well as by the early developmental stage of your research area.

Common Mistakes in Proposal Writing

1. Failure to provide the proper context to frame the research question.
2. Failure to delimit the boundary conditions for your research.
3. Failure to cite landmark studies.
4. Failure to accurately present the theoretical and empirical contributions by other researchers.
5. Failure to stay focused on the research question.
6. Failure to develop a coherent and persuasive argument for the proposed research.
7. Too much detail on minor issues, but not enough detail on major issues.
8. Too much rambling -- going "all over the map" without a clear sense of direction. (The best proposals move forward with ease and grace like a seamless river.)
9. Too many citation lapses and incorrect references.
10. Too long or too short.
11. Failing to follow the APA style.
12. Slopping writing.

## The Conference Review Process

It is hard to generalize the review process for conferences, but most reputable conferences operate according to these basic rules:

1. The paper is submitted to the technical program chair(s). Many current conferences require electronic submission, in either PostScript or PDF formats, occasionally in Word.
2. The technical program chair assigns the paper to one or more technical program committee members, hopefully experts in their field. The identity of this TPC member is kept secret.
3. The TPC member usually provides a review, but may also be asked to find between one and three reviewers who are not members of the TPC. They may be colleagues of the reviewer at the same institution, his or her graduate students or somebody listed in the references. The graduate student reviews can be quite helpful, since these reviewers often provide more detailed criticism rather than blanket dismissal. Any good conference will strive to provide at least three reviews, however, since conferences operate under tight deadlines and not all reviewers deliver as promised, it is not uncommon that you receive only two reviews.
4. In some conferences, there is an on-line discussion of papers among the reviewers for a particular paper. Usually, a lead TPC member drives the discussion and then recommends the paper for acceptance, rejection or discussion at the TPC meeting.
5. The technical program chair then collects the reviews and sorts the papers according to their average review scores.
6. The TPC (or, rather, the subset that can make the meeting), then meets in person or by phone conference. Usually, the bottom third and the top third are rejected and accepted, respectively, without (much) further discussion. The papers discussed are those in the middle of the range, or where a TPC member feels strongly that the paper ended up in the wrong bin, or where the review scores differ significantly. Papers that only received two reviews are also often discussed, maybe with a quick review by one of the TPC members as additional background. The rigor of the TPC meeting depends on the size and reputation of the conference. In some workshops and conferences, the TPC chairs may well make the final decision themselves, without involving the whole TPC.

**Thesis vs. Dissertation:**

A graduate degree generally requires completing either a thesis or a dissertation, and there is a difference between thesis and dissertation.

In Europe the original distinction between a thesis and a dissertation has been largely retained. A doctoral thesis is a focused piece of original research which is performed in order to obtain a PhD. The thesis has evolved from original research now a days requires plenty of background research. So, a thesis will contain extensive citations and references to earlier work, although the focus remains on the original work that comes out of it.

A dissertation is part of a broader post-graduate research project. In a master’s project the student’s ideas are welcomed and expected but the focus is on obtaining technical expertise, not doing original research.

In the United States, the definition of a thesis is almost the opposite of that in Europe. Because a thesis is shorter than a dissertation it gradually came to mean a preliminary degree on the way to a doctorate. A thesis is performed to earn a Master’s degree and dissertation is performed