

RESEARCH REPORT

Introduction

The goal of life is progress and development for good and comfortable life. Research is the backbone to this progress. It has proved to be an essential and powerful tool in the modern world. There would have been very little progress without systematic research.

Research is nothing but a matter of raising questions and then trying to find answers. Thus research is an art of scientific investigation. In a simple term it is a systemized effort to gain new knowledge. The purpose of this knowledge is to find out a new fact which is hidden and to invent new things to the existing stock of knowledge for making advancement. This new knowledge and advancement must be shared with others only then the research gets meaning. How to disseminate the new knowledge? It is only by reporting the findings. The purpose of report writing is to tell the interested readers the problem investigated, the methods used to solve the problems, the results of the investigation and the conclusion inferred from the results. How to make meaningful report writing?

Types of report

Report writing varies greatly in length and type. In each individual's case, both the length and the form are largely dictated by the problems at hand. For instance, business firms prefer reports in the letter form, just one or two pages in length. Chemists report their results in symbols and formulae. Students of literature usually write long reports presenting the critical analysis of some writer or period or the like with a liberal use of quotations from the works of the author under discussion. In the field of education and psychology, the favorite form is the report on the results of experimentation accompanied by the detailed statistical tabulations.

The reports prepared by governmental bureaus, special commissions, and other similar organizations are generally very comprehensive records on the issue involved. News items in the daily papers are also forms of report writing. The first paragraph usually contains the important information and in details the succeeding paragraphs contain materials which are progressively less and less important. Such reports are usually considered as important research products. Ph.D. theses and dissertations are also a form of report-writing, usually completed by students in

academic institutions. Thus, the results of a research investigation can be presented in a number of ways, a technical report, a popular report, an article, and a monograph or at times even in the form of oral presentation.

There are two types of reports, namely, a) Technical report and b) Popular report. A technical report is required to be a full written report of the study undertaken needed whether for record keeping or for public dissemination. The technical report mainly emphasis on the methods employed, assumptions made during the study and the detailed presentation of the findings, conclusions, recommendations including their limitations and supporting data. A popular report is meant for the research results having policy implications. The popular report emphasizes on simplicity and attractiveness. The implication of the content should be reached through clear writing, minimum of technical matter, and mathematical details, free and easy use of charts and diagrams. Moreover, in the popular report emphasis is given on practical aspects and policy implications.

Steps in report writing

Research reports are the product of slow, painstaking, accurate inductive work. The usual steps involved in report writings are:

- 1) *Logical analysis of the subject matter*: it is the first step which is primarily concerned with the development of a subject.
- 2) *Preparation of the final outline*: outlines are the framework upon which long written works are constructed. They are an aid to the logical organization of the material and a reminder of the points to be stressed in the report.
- 3) *Preparation of the rough report*: this step is of utmost importance. In this step the researcher explains the procedure adopted in collecting the material for his study along with various limitations faced by him; the techniques of analysis adopted by him, the broad findings and generalizations and the various suggestions he wants to offer regarding the problem concerned.
- 4) *Rewriting and polishing the rough draft*: this step happens to be the most difficult part of all formal writing. This step requires more time than the writing of the rough draft. The

Careful revision makes the difference between a mediocre and a good piece of writing. In addition the researcher should give due attention to the fact that in his rough draft he has been consistent or not. He should check the mechanics of writing- grammar, spelling and usage.

- 5) *Preparation of a final Bibliography*: the bibliography which is generally appended to the research report is a list of books in some way pertinent to the research which has been done. It should contain all those works which the researcher has consulted. There is a particular way of presenting the bibliography.

Layout of the research report

The researcher report must be in such a way that it conveys enough about the study to whoever reads it so that the reader can place it in its general scientific context, realize the adequacy of the methods followed, and thus form an opinion about the findings and its seriousness. A comprehensive layout should mainly consist of: a) preliminary pages; b) the main text, and c) the end matter.

A) Preliminary pages:

- i. *Title page*: the report should carry a title and date.
- ii. *Acknowledgement*: it must be in the form of ‘preface’ or ‘forward’, which express gratitude. It is a good practice to thank those who supported the researcher technically or financially in the design and implementation of the study. Acknowledgements are usually placed right after the title page.
- iii. *Table of content*: A table of contents is essential. It provides the reader a quick overview of the major sections of the report, with page references, so that s/ he can go through the report in a different order or skip certain sections.
- iv. *List of tables, figures*: if there are many tables or figures it is helpful to list these also, in a ‘table of contents’ type of format with page numbers.

- v. *List of abbreviations (optional)*: If abbreviations or acronyms are used in the report, these should be stated in full in the text the first time they are mentioned. If there are many, they should be listed in alphabetical order as well.

The table of contents and lists of tables, figures, abbreviations should be prepared last, as only then can one include the page numbers of all chapters and sub-sections in the table of contents. Then the researcher can also finalize the numbering of figures and tables and include all abbreviations.

B) The main text: The main texts consist of the following.

- i) *Introduction and conceptual framework*: The purpose of the introduction is to introduce the research project to the readers. The conceptual frame work needs to follow the following format.
- a) Introduction
 - b) Meaning and definition of the problem area or the different variables chosen for the study including dependent and independent variables.
 - c) Need and importance of the variables
 - d) Factors influencing the variables
 - e) Need and significance of the study
 - f) Title of the problem
 - g) Operational definitions
 - h) Objectives: The general and specific objectives should be included as stated in the proposal.
 - i) Hypotheses: according to the framed objectives the hypotheses must be formulated.
 - j) Limitations of the study which includes the delimitations as a separate paragraph.

Thus it should have clear statement of the objectives of research, that is, enough background should be given to make clear to the reader why the problem was considered worth investigation.

The hypothesis of the study and the definition of the major concepts employed in the study should be explicitly stated in this unit of the report.

ii) *Review of related studies*: this promotes a greater understanding of the problem and this ensures the avoidance of necessary duplication. This also helps the researcher to acquire current knowledge in the field of research and to understand and get an insight into what has been already done in this area. This could follow the following format:

- a) Introduction,;
- b) Need for review of related studies;
- c) Indian studies: Studies on the different variables, which could be done separately.
- d) Foreign studies: like Indian studies the different foreign studies on different variables could be included.
- e) Overview of research reviewed along with the critical review of the study is a much.

iii) *Methodology*: The methodology followed for the collection of the data should be described in detail. The methodology section should include:

- a) Introduction
- b) Method adopted, if the method is survey then,
- c) Characteristics of normative survey method
- d) Tools used for the study
- e) Description of the tools
- f) Scoring procedure
- g) Validity
- h) Reliability
- i) Population of the study
- j) Sampling design
- k) Sample

- l) Analysis of the sample
 - m) Administration of the tools
 - n) Statistical techniques used
- iv) *Results and discussion*: The systematic presentation of the findings in relation to the research objectives is the crucial part of the report. The description of findings should offer a good combination or triangulation of data from qualitative and quantitative components of the study. Hence this section carries the data analyzed with detailed inferences. Under each analysis, the analysis of different tools with background variables could be given in table form in detail. This section consists of:
- a) Introduction
 - b) Descriptive analysis
 - c) Differential analysis
 - d) Correlational analysis and
 - e) Structural analysis
- v) *Summary and suggestion*: this part is like a synopsis where the researcher gives the need and significance of the study, title, objective and hypotheses of the problem or the study along with necessary details about the findings and possible recommendations and suggestions for further meaningful research. In making recommendations, the researcher must use not only the findings of his/her study, but also supportive information from other sources.
- a) Introduction
 - b) Need and significance of the study
 - c) Title of the problem
 - d) Objectives of the study
 - e) Hypothesis of the study
 - f) Tools used for the study
 - g) Population and sample

- h) Statistical techniques used
- i) Findings
- j) Limitation of the study
- k) recommendation of the study and
- l) Suggestion for further research

C) The End matter:

- a) *Bibliography*: this contains those sources which have been consulted for the research. These may be books referred, papers consulted, journals and periodicals used with the more relevant and which are not strictly relevant to the problem also could be included. This may follow a certain procedures, namely alphabetical order of the authors or chronological order.
- b) *Appendices*: The appendices should contain any additional information needed to enable professionals to follow the research procedures and data analysis. Information that would be useful to special categories of readers but is not of interest to the average reader can be included in appendices as well. A copy of the rough and final draft of the tool must be included in this section.

Styles of the report

The research report must include everything. The presentation must be clear and accurate. The presentation must be in simple, short and coherent form. It is an art which all the researchers must be well versed. Hence the researcher must remember that the reader:

- Is short of time
- Has many other urgent matters demanding his or her interest and attention
- Is probably not knowledgeable concerning ‘research jargon’

Therefore the researcher must keep in mind the following rules:

- *Simplify*. Keep to the essentials.
- *Justify*. Make no statement that is not based on facts and data.

- *Quantify* when you have the data to do so. Avoid ‘large’, ‘small’; instead, say ‘50%’, ‘one in three’.
- *Be precise and specific* in your phrasing of findings.
- *Inform*, not impress. Avoid exaggeration.
- Use short sentences.
- Use adverbs and adjectives sparingly.
- Be consistent in the use of tenses (past or present tense). Avoid the passive voice, if possible, as it creates vagueness and repeated use makes dull reading.
- Aim to be logical and systematic in your presentation.

Editing the final draft

This needs more care and time in proof reading with respect to language, grammar, spelling, meaning, and subject content. Care must be taken for logical, sequential presentation of the inner text contents. Some precautions must be taken. They are:

- i) The length of the report must be precise and sufficiently long enough to cover the subject but short enough to raise curiosity and maintain interest.
- ii) It must convey the matter to the maximum extent and at the same time as simple as possible.
- iii) Care must be taken to verify whether the visual illustrations, tables, charts, statistical tables are properly inserted at the appropriate place with proper numbering.
- iv) This must be evaluated in connection with the appropriate layout designed in accordance with the objectives of the research in the problem undertaken.
- v) The presentation of the report must be in logical analysis of the subject matter.
- vi) Care must be taken in going through the Appendices arrangement whether they are enlisted with respect to the technical data in the report.
- vii) The norms and rules of editing the Bibliography of the sources and Index should be verified for chronological order, and

- viii) This includes the verification of the proper inclusion of objective of the study, nature of the problem, research methodology employed and the adoption of the analysis techniques, whether they are clearly stated.

Conclusion

In the above few pages an attempt is made to illustrate some of the major points to explain scientifically the research report, because the report writing makes the final stage of research study. After the collected data has been analyzed and interpreted, and various generalizations have been drawn the report has to be prepared.

References

1. Kothari,C.R. “Research Methodology- Methods and Techniques”, Wishwa Prakashan, New Delhi, 2001.
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