

Structure:

- 9.1 What is Research Report?*
- 9.2 Types of Report*
- 9.3 contents of Report*
- 9.4 Layout of the Research Report*
- 9.5 Principles of Report Writing*
- 9.6 Steps in Report Writing*
- 9.7 Steps Involved in Drafting a Research Report*
- 9.8 Documentation*
- 9.9 Footnotes*
- 9.10 Bibliography*
- 9.11 Questions*

9.1 WHAT IS RESEARCH REPORT?

Research report is considered a major component of the research study for the research task remains incomplete till the report has been presented and/or written. As a matter of fact even the most brilliant hypothesis, highly well designed and conducted research study, and the most striking generalizations and findings are of little value unless they are effectively communicated to others.

The purpose of research is not well served unless the findings are made known to others. Research results must invariably enter the general store of knowledge. All this explains the significance of writing research report. There are people who do not consider writing of report as an integral part of the research process.

But the general opinion is in favour of treating the presentation of research results or the writing of report as part and parcel of the research project. Writing of report is the last step in a research study and requires a set of skills somewhat different from those called for in respect of the earlier stages of research. This task should be accomplished by the researcher with utmost care; he may seek the assistance and guidance of experts for the purpose.

9.2 TYPES OF REPORT

Research reports vary greatly in length and type. In each individual 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. Banks, insurance organisations and financial institutions are generally fond of the short balance-sheet type of tabulation for their annual reports to their

customers and shareholders. Mathematicians prefer to write the results of their investigations in the form of algebraic notations.

The reports can be prepared by governmental bureaus, special commissions, and similar other organisations are generally very comprehensive reports on the issues involved. Such reports are usually considered as important research products. Similarly, Ph.D. theses and dissertations are also a form of report writing, usually completed by students in academic institutions.

9.3 CONTENTS OF REPORT

The researcher must keep in mind that his research report must contain following aspects:

1. Purpose of study
2. Significance of his study or statement of the problem
3. Review of literature
4. Methodology
5. Interpretation of data
6. Conclusions and suggestions
7. Bibliography
8. Appendices

These can be discussed in detail as under:

(1) Purpose of Study

Research is one direction-oriented study. He should discuss the problem of his study. He must give background of the problem. He must lay down his hypothesis of the study. Hypothesis is the statement indicating the nature of the problem. He should be able to collect data, analyze it and prove the hypothesis. The importance of the problem for the advancement of knowledge or removal of some evil may also be explained. He must use review of literature or the data from secondary source for explaining the statement of the problems.

(2) Significance of Study

Research is re-search and hence the researcher may highlight the earlier research in new manner or establish new theory. He must refer earlier research work and distinguish his own research from earlier work. He must explain how his research is different and how his research topic is different and how his research topic is important. In a statement of his problem, he must be able to explain in brief the historical account of the topic and way in which he can make and attempt. In his study to conduct the research on his topic.

(3) Review of Literature

Research is a continuous process. He cannot avoid earlier research work. He must start with earlier work. He should note down all such research work, published in books, journals or unpublished thesis. He will get guidelines for his research from taking a review of literature. He should collect information in respect of earlier research work. He should enlist them in the manner given below:

1. Author/Researcher
2. Title of research /Name of book

3. Publisher
4. Year of publication
5. Objectives of his study
6. Conclusion/Suggestions

Then he can compare this information with his study to show separate identity of his study. He must be honest to point out similarities and differences of his study from earlier research work.

(4) Methodology

It is related to collection of data. There are two sources for collecting data; primary and secondary. Primary data is original and collected in field work, either through questionnaire/interviews. The secondary data relied on library work. Such primary data are collected by sampling method. The procedure for selecting the sample must be mentioned. The methodology must give various aspects of the problem that are studied for valid generalization about the phenomena. The scales of measurement must be explained along with different concepts used in the study.

While conducting a research based on field work, the procedural things like definition of universe, preparation of source list must be given. We use case study method, historical research, etc. He must make it clear as to which method is used in his research work. When questionnaire is prepared, a copy of it must be given in appendix.

(5) Interpretation of Data

Mainly the data collected from primary source need to be interpreted in a systematic manner. The tabulation must be completed to draw conclusions. All the questions are not useful for report writing. One has to select them or club them according to hypothesis or objectives of study.

(6) Conclusions/Suggestions

Data analysis forms the crux of the problem. The information collected in field work is useful to draw conclusions of study. In relation with the objectives of study the analysis of data may lead the researcher to pin point his suggestions. This is the most important part of study. The conclusions must be based on logical and statistical reasoning. The report should contain not only the generalization of inference but also the basis on which the inferences are drawn. All sorts of proofs, numerical and logical, must be given in support of any theory that has been advanced. He should point out the limitations of his study.

(7) Bibliography

The list of references must be arranged in alphabetical order and be presented in appendix. The books should be given in first section and articles are in second section and research projects in the third. The pattern of bibliography is considered convenient and satisfactory from the point of view of reader.

(8) Appendices

The general information in tabular form which is not directly used in the analysis of data but which is useful to understand the background of study can be given in appendix.

9.4 LAYOUT OF THE RESEARCH REPORT

There is scientific method for the layout of the research report. The layout of the report means as to what the research report should contain. The contents of the research report are noted below:

1. Preliminary Page
2. Main Text
3. End Matter

(1) Preliminary Pages

These must be title of the research topic and data. There must be preface or foreword to the research work. It should be followed by table of contents. The list of tables, maps should be given.

(2) Main Text

It provides the complete outline of research report along with all details. The title page is reported in the main text. Details of text are given continuously as divided in different chapters.

- (a) Introduction
- (b) Statement of the problem
- (c) The analysis of data
- (d) The implications drawn from the results
- (e) The summary

(a) Introduction

Its purpose is to introduce the research topic to readers. It must cover statement of the problem, hypotheses, objectives of study, review of literature, and the methodology to cover primary and secondary data, limitations of study and chapter scheme. Some may give in brief in the first chapter the introduction of the research project highlighting the importance of study. This is followed by research methodology in separate chapter.

The methodology should point out the method of study, the research design and method of data collection.

(b) Statement of the Problem

This is crux of his research. It highlights main theme of his study. It must be in non technical language. It should be in simple manner so ordinary reader may follow it. The social research must be made available to common man. The research in agricultural problems must be easy for farmers to read it.

(c) Analysis of Data

Data so collected should be presented in systematic manner and with its help, conclusions can be drawn. This helps to test the hypothesis. Data analysis must be made to confirm the objectives of the study.

(d) Implications of Data

The results based on the analysis of data must be valid. This is the main body of research. It contains statistical summaries and analysis of data. There should be logical sequence in the analysis of data. The primary data may lead to establish the results. He must have separate chapter on conclusions and recommendations. The conclusions must be based on data analysis. The conclusions must be such which may lead to generalization and its applicability in similar circumstances. The conditions of research work limiting its scope for generalization must be made clear by the researcher.

(e) Summary

This is conclusive part of study. It makes the reader to understand by reading summary the knowledge of the research work. This is also a synopsis of study.

(3) End Matter

It covers relevant appendices covering general information, the concepts and bibliography. The index may also be added to the report.

9.5 PRINCIPLES OF REPORT WRITING

Following are some important principles for writing a good research report:

- **Make small sentences:** Reading begins to get strenuous when sentences used in the research report average more than 25 words.
- **Vary sentence length:** In using short sentences do not let the work become choppy. Sentences of considerable length are all right provided, they are balanced with enough short sentences.
- **Use simple words:** The researcher is advised to use simple words in his research report.
- **Use familiar words:** It is better to use familiar words in a research report.
- **Avoid unnecessary words:** The use of unnecessary words tire a reader and fog up the writing.
- **Write to express not to impress:** The best way to impress the reader of report is to express what you have to say clearly and directly.
- **Write as you talk:** The researcher should make his report writing as though it is his speech.
- **Keep as many active verbs as possible:** Use of active verbs puts life into report writing.
- **Tie in with reader's experience:** Always write research reports with a particular reader in mind. Relate what you have to tell him about your research report. This is the way to have the reader understand your report.
- **Make the report short and sweet:** A short report makes reading interesting and sweet. Short report should not mean short-cut report.

9.6 STEPS IN REPORT WRITING

It is the critical stage and hence, it requires patience. There is no mechanical formulae to present a report, though there are certain steps to be followed while writing a research report. The usual steps in report writing can be indicated in the following manner:

- Logical analysis of subject matter.
- Preparation of final outline.
- Preparation of rough draft.
- Rewriting and polishing.
- Preparation of final bibliography.
- Writing the final draft.

It is pertinent to follow these steps and hence, it is essential to understand these steps thoroughly.

(a) Logical Analysis of Subject Matter

When a researcher thinks of doing a research, he must select subject and topic of his research work. The subject must be of his own interest and there must be scope for further research. Such can be selected and developed logically or chronologically. He must find out mental connections and associations by way of analysis to finalize his subject. Logical treatment often consists in developing from the simple possible to the most complex strictures. He can use the deductive method or inductive method in his research work. Secondly, the alternative in selecting research subject is to use chronological method. In this method, he should concentrate on the connection or sequence in time or occurrence. The directions for doing or making something usually follow the chronological method. In this method, he should concentrate on the connection or sequence in time or occurrence. The directions for doing or making something usually follow the chronological order.

(b) Preparation of Final Outline

Outlines are the framework upon which long written works are constructed. It is an aid to logical organization of the material and remainder of the points to be stressed in the report. He should rely on review of literature. The earlier research works can provide basic information as well as thinking to the researcher to pursue his subject.

(c) Preparation of Rough Draft

The purpose of the report is to convey to the interested persons the whole result of the study in sufficient detail and so arranged as to enable each reader to comprehend the data and so determine for himself the validity of conclusions. Taking into account this purpose of research, the research report writing has its own significance. The researcher has already collected primary data and secondary data. He has also set his objectives of the study. Taking into account the objectives of his study, he should make an attempt to prepare a draft report on the basis of analysis of the data. He should prepare a procedure to be followed in report writing. He must mention the limitations of his study. He may analyze data systematically with the help of statistical methods to arrive at the conclusions. The research is fact finding study which may lead the researcher to point out suggestions or recommendations.

(d) Rewriting and Polishing the Rough Draft

Research is a continuous process. Research is not essay writing. Researcher must consider the data, write down his findings, reconsider them, and rewrite. This careful revision makes the difference between a mediocre and a good license of writing. The researcher must concentrate on weakness in the logical development or presentation. He should check the consistency in his presentation. He must be

aware that his report writing must be of definite pattern. He must also take utmost care of the language of writing a report.

(e) Bibliography

This helps the researcher to collect secondary source of the data. This is also useful to review the earlier research work. He should prepare the bibliography from the beginning of his research work. While selecting a topic or subject of research, he must refer books, journals, research projects and list the important documents in systematic manner. The bibliography must be in proper form. The researcher must have separate cards, indicating following details, readily available with him, so that he can make a note of it while he refers to a book/journal/research report.

The bibliography must be included in the appendix of his research report. It must be exhaustive to cover all types of works the researcher has used. It must be arranged alphabetically. He can divide it in different sections, such as books in first section, journals in second, research reports in third, etc. Generally the prescribed form for preparation of bibliography is as given below:

The book must be noted in following manner:

- (1) Name of Author (Surname first).
- (2) Title of book.
- (3) Publisher's name, place and data of publication.
- (4) Number of volumes.

The article can be mentioned in following manner:

- (1) Name of author (surname first)
- (2) Title of article (in quotation mark)
- (3) Name of periodical (underline it)
- (4) The volume or volume and number
- (5) Data of issue
- (6) The pagination

(f) Final Report

The final report must be written in a concise and objective style and in simple language. The researcher should avoid expressions in his report, such as "it seems", "there may be" and like ones. He should avoid abstract terminology and technical jargon. He may refer to usual and common experiences to illustrate his point. The report writing is an art. No two researchers may have common style of report writing. But it must be interesting for a common man to add to his knowledge.

However report on scientific subject may have most technical presentation. The scientists may be familiar with technical concepts and they may find it valuable if such report is mostly technical in form.

9.7 STEPS INVOLVED IN DRAFTING A RESEARCH REPORT

A research report must be well drafted so that it is seriously taken by others and all that have to be said are well said. Reader orientation, purpose orientation, time orientation, technology orientation, etc., are all needed. The steps in writing a research report are presented below.

1. Organization of Thought

Organization of thought as to how the report be presented is the most fundamental starting point in the journey of preparation a research report. Ideas come before the mind eye. These are thought over again and a frame of presentation is planned. This plan does not in itself constitute style, but it is the foundation.

2. Acquaintance with the Research

Full acquaintance with research is needed. This is facilitated by notes. It is desirable to make notes on separate cards or slips called form-facet. Accuracy and adequacy are required – The second facet of mastery over notes consists in the investigator's complete control over the data, called study facet, i.e., understanding each fact by itself and in terms of others and of the researcher's own thoughts; the notes to be compared; criticized and revalued in order to enable the investigator to direct and organize the data in his own way and perhaps differently from what others have done.

3. First Draft

The first draft concentrates on substance, i.e., fullness of facts. All the facts of value are to be brought together. In addition to fullness, accuracy of the facts incorporated into the text becomes necessary. Another requirement is that there should be balance, proportion and development in facts. Importance is to be given to the comprehensiveness of the report but not to the language and form. For writing the first draft the researcher should have control over his notes and should think continuously over the problem. In a way, the first draft is the most important of the different stages in reporting. This report may have to be re-written a number of times and still it continues to remain only a working draft. There are three purposes in writing the first draft, *viz.*, to weave the material together for making clear connections, to assure the investigator himself of a satisfactory organizations and fullness of the facts, and to avoid blank paper fright that may be present in every young researcher.

4. Second Draft

After a lapse of sometime from the completion of first draft, the revision is made for writing the second draft. While drafting the second one, the researcher should concentrate largely on form and language. The researcher should give the first draft, at this stage, a shape so that it can be readable, clear and lucid. Considerable trimming or editing will have to be done to make the writing precise, concise and brief. Finally, at the second draft stage, critical evaluation will have to be made of all that has been written-facts, findings, conclusions and recommendations. To make the report readable and effective, the language plays major part.

5. Third Draft

The final stage in drafting is the preparation of final report. It concentrates mainly on the finish and final touches, i.e., on documentation and polish to make the report weighty, authoritative, convincing and attractive. Documentation indicates the references to the sources, other previous and current work and view, additional data and discussion and suggested further reading on the specific problem as handled by the researcher. In other words, it indicates the thoroughness of the investigation and on the other a guide to further work. A good research paper depends not only upon the amount of reading or notes taken or upon the form of presentation but also upon the accurate and thorough recording of the investigation.

9.8 DOCUMENTATION

Documentation is the process of collecting and extracting the documents which are relevant to research.

Documents may be classified into:

- Personal documents;
- Company documents;
- Consultants' report and published materials; and
- Public documents.

Personal documents are those that are written by or on behalf of individuals. They may include autobiographies, biographies, diaries, memoirs, letters, observations and inscriptions, which are primarily written for the use and satisfaction of individuals and which can be utilized for research purposes. Personal documents play a very vital role in research, when certain information is not available from any other sources; however, such documents are subject to the difficulties of availability, reliability and validity of inferences.

Company documents are the most essential types of documents in management research, annual reports, statements of income and expenditure and balance sheets, files and records, policy statements, resolutions, minutes of board of directors, general bodies and executive conferences, performance records and evaluation files, specific forecasting and evaluation reports, directors' reports, etc. Many of these documents are reliable ones, though they are subject to the problems of availability and adequacy. Such documents can be published or unpublished.

Consultant's published materials consist of report of professional consultants, records of commodity boards, chambers of commerce, FICCI, manufacturers' associations and industry associations.

Public documents are documents, both published and unpublished, of government organizations and documents of public interest. They include government records and files, draft outlines of five-year plans, consultative committee reports, finance commission reports, special enquiry commission reports, Company Law Board reports, MRTP Commission reports, reports and files of the Registrar of Companies, the Registrar of Firms, the Ministry of Commerce and Industry, etc., report of population census, National Sample Survey and such other government research institutions. Such documents are valuable if they are reliable and suitable for a particular study if they can be obtained. Documentation is one of the most important needs of any management researcher at the primary state of his research.

9.9 FOOTNOTES

Footnotes are meant to give complete bibliographical references and to provide the reader with information to enable him consult sources independently. These may be placed at the foot of a page or at the end of every chapter. When footnotes are given at the foot of the page, they are to be separated from the text by a fifteen space solid line drawn from the left margin and one double space below the last line of the text. If given at the end of a chapter, a centered heading 'FOOTNOTES' is necessary. Reference to footnotes is made by the use of superscripts i.e., numerals rose by one-half space. Footnotes should be numbered consecutively through a chapter, right after the statement. However, footnotes should not be resorted to common place statements or ordinary facts. They must be restricted to direct quotations, original ideas, statements, definitions, illustrations and diagrams. If a quotation found in one source that is obtained from another source, is used, both the sources should be listed in

the footnote. Footnotes should be given in single line spacing with the first line only indented. A double space should separate successive footnotes.

In this context, certain conventions in footnoting should be kept in mind. While writing the author's name, the first name or initials should be written first. Titles of completed works, such as books and reports should be underlined. Titles of articles should be enclosed by double quotation marks. The publisher's name, year or date of publication and the exact page(s) of the source of reference should also be given in this order.

9.10 BIBLIOGRAPHY

The 'works cited' form of bibliography is preferable over the 'sources consulted'. Every book, thesis, article, documents which has been cited should be included in the list of 'works cited'. The bibliography should follow a logical arrangement in alphabetical order. In report of current practice is to have one comprehensive listing - not to divide into books, journals, newspapers, official papers, documents and manuscripts.

The author(s) name, the title of the work, date of publication, name of the publisher and the place of publication be mentioned.

For articles, the volume number and inclusive pages be also given, the author's initials or surname should follow the name.

When there are three or more authors of a particular work, the co-authors may be referred alphabetically. If there be more than one work by the same author, the author's name should be listed only once; subsequently a line will substitute his name.

This bibliographical listing should not be numbered. It should be given only at the end of the thesis.

9.11 QUESTIONS

1. Explain what is a research report? And types of Research report?
2. Explain the contents of research report
3. Explain the principles in report writing
4. Explain the steps involved in research report writing

