

THE RESEARCH REPORT

Meaning and purpose of a report : Report writing is the last activity of the research process. Although the research process itself is often fascinating, sooner or later it will be necessary to assemble the findings and determine the validity of the conclusions. Further analysis of data seems unrewarding. Research report writing is thus the culmination of the research investigation. It is a brief statement of most significant facts that are necessary for understanding the generalisations drawn by the researcher. It is a technical activity which "requires considerable thought, effort, patience, skill and penetration and an overall approach to the problem, data and analysis, as well as firm control over language and greater objectivity". The preparation of the report is then the final stage of the research and its purpose is "to convey to interested persons the whole result of the study, in sufficient detail and so arranged as to enable each reader to comprehend the data and to determine for himself the validity of the conclusions". It is the dissipation of knowledge, broadcasting of generalisation and helping further research in the related field.

While writing the research report it is essential to keep in mind certain issues.

A report could be simple to write all the relevant details which were finally developed. It should be very carefully worded, understandable and represent knowledge and wisdom of the researcher on the one hand, his drafting capacity on the other. Besides, perfection in the research report is achieved by continuous and persistent thought and creative and intelligent writing. The problem of the researcher in the first instance is to find out whether the report is meant for publication? who will do this job and what will be the cost? The second step is that the report should be presented in an attractive form i.e. the researcher should know whether the report is to be typed? mimeographed? printed or photolithographed. The third point is that the researcher should know the level of knowledge of the readers. There are three broad categories of readers. (1) the layman and the general public, (2) the administrator and the project sponsor and (3) the fellow researcher and the technical expert.

2. Target group in report writing : The preparation of research report for layman must be interesting, simple and lucid. For the general public the emphasis should be on clarity, correct exposition, expression and simplicity. For example if a businessman orders a market survey to be conducted for his product, the report submitted must be non-technical in nature. Otherwise he

would not be able to make any use of it. More and more reports are now being written by the journalists for the society because utilitarian outlook is being considerably developed in all the societies. For the administrator report should neither be too general nor too technical. If the researcher tries to simplify it too much, the report may become either too vast or too simple and unable to carry the required impression. The report may contain some technical aspects but on the whole simple and direct. Every branch of knowledge has not only its technical terms but also its own specific way of expression. Unless it is followed the report would appear simply childish and would lose its research fervour. Therefore it is necessary that in order to understand the report the reader himself has to rise higher, rather than let the researcher stoop too low for him. For the project sponsor the report should stress the relevance of the study and its contribution to the general knowledge. The research report must contain the necessary information about statement of the problem, the research procedure, the results and the implications of the research study. For the fellow researcher, the research report must be helpful to throw some new light which can make the building up of a new hypothesis and a new theorising. For the technical expert the researcher is expected to give full account of the technical aspects both in the sampling methods and subject matter. Fellow professionals are more concerned about the methods employed. In fact the value of the findings and therefore of the report itself depends on the techniques adopted. Conceptual and analytical framework sample design should be adequately explained. A technical report contains the research aspects like the problem and its nature, the method and scientific accuracy, the data and their dependability, the logical relationships of the data and interpretation. These contents have to be presented logically and sequentially with simplicity, clarity and brevity. Thus a report written for an expert must be more rigorous, more informative than what is written for the general readers.

There may be various types of research reports e.g., thesis, monograph, journal article and so on. Because of the spatial limitations and selectivity, a journal article cannot discuss every aspect of the research in details as can be done in a thesis. The style of the report depends on purpose. It may not be the same everywhere but by and large, a pattern emerges as we shall see a research report usually follows a fairly standardised pattern given below:

3. Contents of a Report : The format is divided into three broad categories namely (1) preliminary section (2) main body of the report (3) reference section.

The preliminary section will vary according to the type of research one has undertaken. The headings below this section are meant as a guide and one may decide to omit some of them or to amalgamate when this seems appropriate.

The main body of the report is divided into five sub-sections, namely introduction, review of the literature, design of the study, presentation and analysis of data, summary and conclusions. Introduction is the starting point.

We should say why we undertook the research—what the problem is and why it is important. Depending on the particular piece of research, the review of the literature is introduced. This division will show what is known already and how our research will fill a gap in knowledge or replicate earlier work.

The description of the design of our research will depend on the particular project we have undertaken. It includes procedures, methods and description of the findings. The section presentation and analysis of data will interpret the results of the research. Tables, figures will substantiate the analysis. The summary division will organise the results and point out the implications of the findings for policy or for other researchers and show what further research needs to be done.

The last category namely the reference section should include bibliography, appendices and index in a proper form.

4. Format of the Research Report :

(A) Preliminary Section :

- (a) Title page
- (b) Certificate
- (c) Declaration
- (d) Acknowledgements
- (e) Preface or Forward or Abstract
- (f) Table of contents
- (g) List of Tables (if any)
- (h) List of Figures (if any)

(B) Main Body of the Report :

(1) *Introduction*

- (a) Statement of the problem
- (b) Significance of the study
- (c) Purpose
- (d) Definition of important terms
- (e) Objectives
- (f) Hypothesis
- (g) Methodology
- (h) Period of study
- (i) The study area
- (j) The data
- (k) Chapterisation

(2) *Review of the Literature* :

- (a) Critical analysis of the previous research
- (b) Brief restatement of the present study

(3) Design of the Study :

- (a) Procedures used
- (b) Methods of gathering data
- (c) Description of data.

(4) Presentation and Analysis of Data :

- (a) Text
- (b) Tables
- (c) Figures

(5) Summary and Conclusions :

- (a) Brief restatement of the study
- (b) Description of procedures used
- (c) Main findings and conclusions
- (d) Recommendations for further research

(C) Reference Section :

- (a) Bibliography
- (b) Appendix
- (c) Index

5. Qualities of Good Research Report : A good research report must have certain basic and essential qualities. There is a great temptation to rush into writing because this gives a feeling of something accomplished and indeed it is true that certain sections of the report can sometimes be written in draft form before the research is complete.

In general, however, it is better to spend time to work out a plan and decide precisely what it is that we want to write in a formal way.

6. Planning of the Report : Before writing, a good deal of planning is necessary. It forms the basis of preparing the research report. A well conceived planning facilitates report writing with proper emphasis to different aspects. It is nothing but arrangement of ideas in a logical and coherent manner within the framework of the overall structure laid down. Therefore, timeliness of a research study is very important. Normally while planning a research investigation, the date for report writing is set in advance and any modifications are viewed in the light of their effects on the report writing time. As such writing a research report requires a concerted effort and considerable time which a researcher must provide right from the beginning of the study.

7. Organisation of a Report : It involves three essential steps namely (1) full acquaintance with research notes and organising it properly (2) adequate thought about the structure of the report (3) formation and control over notes.

Arrangement of Ideas : Notes taking starts even before the selection of research topic. The accuracy and utility of the notes taken from wide ranging

literature as also from field observation has to be put to optimum use while writing the report. Methodical and systematic organising of notes is a prerequisite for effective writing while organising research notes the following points have to be adhered. (1) to take down notes, it is always better to use cards rather than the sheets of paper. (2) the cards have to be assorted and arranged topically (3) after organising the notes, the report writer should consider the adequacy of the notes, if he finds that the note is inadequate, he has to gather additional information.

Reflective Thinking : A good research report must have sufficient clarity of both thought as well as language. The thinking process starts even before choosing a research topic. As far as possible the sentences should be simple and important points are to be highlighted in small paragraphs. Both the thought as well as the language should be so clear that the reader must easily grasp what the report writer wants to say. Research is thus a thinking process. Reasoning power of the researcher is the efficient tool for research decisions, interpretation and generalisation and giving meaningful recommendation. Clear thinking results in clear writing. As Whitney puts it "there is a high positive correlation between good thinking and effective writing". M.H. Gopal says "research is not merely the accumulation, evaluation and assimilation of facts, it is also and more so rebuilding them into meaningful whole. This demands patient, deep and alert thinking. The researcher must therefore develop his thinking faculty and train himself in the thinking process.

Formation and control over notes : The outline prepared for the purpose of the report writing should be elaborate so as to include all important aspects which should find a place in the report. The outline is made at three stages : topical outline, paragraph outline and sentence outline. Topical outline or skeleton outline includes the chapters and broad aspects to be included in each chapter. Paragraph outline covers all major paragraphs indicating the central idea of each paragraph. Sentence outline composed of points to be included in sentences. According to Parten "Generally, the report secures greater clarity and unity if the entire report is first outlined under large headings and then filled in by more and more detailed outline". M.H. Gopal suggests the following points to be observed while planning an outline (1). It should be as detailed as possible and should enable continuous writing (2). It should not be vague. (3) It should fulfill the considerations of chronology, topical, unity, coherence and transition (4). Each paragraph should contain one major idea.

The advantages of proper planning and organisation of a research report are as follows: (1) Ideas and facts which are relevant to the study alone are included. (2) The report gets greater clarity and unity. (3) Findings and results are easily communicated to the readers. (4) It facilitates transition in passing from one idea to another. (5) Ensures utility and sequence in presentation of facts. (6) Results in an integrated and comprehensive research report.

8. Presentation of a Report : Perhaps the most difficult part of the report is the way in which it is to be presented. Presentation is the heart of the research report. It is generally accepted that a good report must keep the readers in view and their capacity of understanding. It should be upto the taste, expectations and understanding of laymen and should also be upto their standard of approach. A good report writer should neither make his report too voluminous nor too concise. He should be in a position to clarify the concepts of his report, contradictions and confusions must be avoided in presentation. The terminology should be clearly defined and consistently used in the same sense throughout the report. In his presentation, the report writer should clearly bring out the need and necessity of the problem and the way in which it was proceeded with. It should inspire the confidence of the readers. When a report must refer to the past events very frequently, it is better to present the report entirely in the past tense so as to avoid confusion and shifts from the past to the present. There should be chapters, sections, sub-sections, headings, sub-headings, tables and diagrams.

Presentation of research data in the form of charts and diagrams attract the attention of the readers. Besides, this enables the complex facts to be grasped more readily. Bar diagrams, pie diagram and pictogram are the methods more commonly used in comparing the groups or periods in respect of some characteristics. Besides the charts, the graph is also one of the most common devices for providing trend. The map is useful in ecological analysis. Such aids according to Goode and Hatt "not only present the data in readable form but also help the reader to understand the more complex tabulations". In short, under presentation all important data has to be included in the report and nothing has been left out.

9. Style in Writing : In the case of a research report, we need to vary the style and presentation according to whether the report is intended to convey information for general use, specific information for participants in an event, as in a discussion paper or as a formal requirement for a course. Hence style should be appropriate, clear and accurate. In many cases even though the material may be good and data collected quite comprehensive and authentic, yet due to poor style in writing, the report might not be well received. The presentation of most profound ideas in simple, short and coherent sentences is the art of a complete researcher. A report must not be loaded with phrases, idioms and long sentences. A report writer must describe his findings in a scientific and logical style and leave it to the reader to feel convinced or otherwise. According to M.H. Gopal the following factors influence good write-up (1) the reader in view (2) non-technical the problem is (3) the researcher's hold over his facts and techniques (4) his command over language and (5) the form and fullness of the notes i.e. of the data (6) documentation.

Research report writing is a reasoning process and without clarity of thought, there won't be clarity in writing. The researcher should have a good

command over the language. He should take care of the economy of words and concentration of ideas for smooth precision and clarity, objectivity is yet another principle in report writing. The research report should pass through three drafts. The first draft should be written as rapidly as possible and without any break. In the subsequent drafts the report should be improved both in the form and the language by considerable trimming, pruning and chiselling. The report writer in his draft should take care to avoid too much technical jargons, complex and ornate language and repetition. Ideas and sentences have to be realigned by cutting and joining so that the report gets clarity, order, logic, unity, coherence and naturalness. By patient review of the written materials, improving the draft and by giving more thought and effort, the write-up could be made effective and poignant. Besides giving final touch to the report, it is better to keep the manuscript aside for a while so that it gets cold. The gaps and weaknesses come to limelight only after a lapse of time, when the material is carefully re-examined and re-edited. Of course there is no unique and universally acceptable method of writing a research report. Much will depend on the topic of research, the degree of sophistication introduced, the type and extent of the materials and techniques introduced and above all, the acumen, skill and the imagination of the researcher.

10. Conclusion and Generalisation : This is the last section of the research report. It is customary to conclude with a brief resume or summary, restating the whole performance all over again briefly and incisively. A useful way to organise our conclusion is to begin by referring back to the introduction where we stated the problem and also to the hypothesis. We briefly review the procedures, findings and entire development of the study. The conclusions announce whether the findings of the study confirmed or disconfirmed the hypothesis. The summary and conclusion chapter may point out the implications of research findings for policy or for other researchers and show what further research needs to be done. It is the most widely read part of a study because it recapitulates the information that has been presented already and many readers scan the summary first to obtain an overview of the problem and to determine the usefulness of the study to them. Selected bibliographical references may be very useful to gauge the content, the seriousness of the study and the awareness of the researcher. This should include all the books and articles which are relevant to the research and there should be presented in alphabetical order. It may be necessary to include the appendices like sample questionnaires, transcription sheets, sample interviews and so on. Appendices should be numbered and so on appendices should be numbered and given a title. There is nothing wrong if footnote is given a title. There is nothing wrong if foot note is given for each chapter but it is better that there should not be no repetition of footnotes. Citation of footnotes should be authentic.

It thus becomes clear that report writing is not an easy affair. It needs care at every stage. The report writer should keep this in mind in finalising the report.