

different aspects of work should be arranged as nearly as possible in the same order as the items are considered in later divisions. The On-Line Search facility and Computer Search Services are very helpful for review of literature. To improve the database, a researcher should become familiar with:

- i. The contents of database particularly list of publications and rationale for included
- ii. ~~The~~ methods of obtaining documents and other materials uncovered by the search.
- iii. The structure and contents of system dictionary of key words or descriptors.
- iv. The method of constructing search instructions using key words and logical
- v. ~~The~~ ~~number~~ ~~of~~ ~~items~~ ~~to~~ ~~be~~ ~~obtained~~ ~~by~~ ~~a~~ ~~search~~ ~~request~~, sometimes provided by documentation.

c. Materials and methods

In some cases, the word “Materials” is not applicable. In such cases this chapter may be named “Methodology”. This section usually explains various aspects of what materials were used and how the work was done. The soundness of research has its foundation on the methods followed by the investigator. The validity of his/her technique and logic of interpretation need to be clearly stated and must be acceptable.

To understand and evaluate a thesis, readers would like to know exactly how the study was carried out. If the author does not supply complete information in this chapter, no credence can be placed on the research results and conclusions. It is also essential that the material selected and the basis of selection, if drawn from literature, be clearly described along with other relevant information on the subject.

If a student does not attend to his work personally, he/she will always remain shy and indifferent to the use of research, analytical procedures, statistical methods and their presentation. The make and models of scientific equipment used may be mentioned which will help validate the health of findings.

d. Results and discussion

Some workers name this chapter as simply “Results and then Discussion” separately. This is the main and an important part of the manuscript containing description of experimental observations. Representative data, therefore, should appear in a clear,

concise, and logical form. The emphasis should be on precise description of the phenomenon observed as well as collection of data and not on reflection.

A very common error to be avoided, when no number is involved, the word percent should be used instead of percentage, e.g. “it was expressed as a percentage of the total; it was 10 percent or 10 % of the total but not to be expressed as percent of the total.

e. Discussion

If results are given in one section and the discussion in another, then title “Discussion” may be given. If both the “Results and Discussion” are presented combined, then separate title “Discussion” must be avoided.

In this section, the writer may answer the questions “So what?” as he/she interprets his/her data in relation to the original objectives. He clarifies the meanings and implications of various results and may indicate possible future developments. The reasoning done must be accurate and in accordance with a recognized method of logic. It is emphasized again that “Review of Literature” and “Discussion” parts of a thesis, are intimately related, the former reflected entirely in the subsequent account.

f. References

It is important that the students should go to the primary sources of information and an effort always be made to obtain the information from original articles published in a journal or a reprint obtained from the author. The tendency to cite the literature from abstracting journals is neither enough nor in scientific spirit. In only unavoidable circumstances, the secondary source of information may be utilized or when the original article is in a language other than English. Secondary reference(s) should be written in parenthesis after quoting primary reference without the main heading. Following points should be kept in mind while enlisting references.

- i.** References should be arranged alphabetically according to author and then according to the year.
- ii.** A complete reference includes author(s), year of publication, complete title of the paper, and reference to journal (See sample references).
- iii.** The number of the issue of the volume of a journal may not be given, unless paging of each number starts from 1 or issue number may be given in all the references consistently.

- iv.** In case of book, the name of the author(s), year of publication, title, edition and complete address of the publisher must be given and should not be underlined.
- v.** Names of journals and number of their volumes should not be underlined.
- vi.** The words 'Idem' and 'Ibid' may be avoided in citing references.
- vii.** Abbreviations for journals should be used as given in Appendix 5.
- viii.** The word 'References' may be used in preference to 'Literature Cited'.
- ix.** The title must appear exactly as it does on the first page of article or the title page of the book.
- x.** For titles of scientific papers, only the first letter of the first word is capitalized (exceptions are proper names, scientific names or certain other words which are capitalized always).
- xi.** The family name of the first or sole author precedes the initials or given names. The names of co-author(s) follow in normal order and are separated by comma.
- xii.** When the reference is the proceedings of a symposium etc. and the author to be cited is the editor, it may be indicated as such in parenthesis.
- xiii.** References except of publication by Government department or other Organizations, for which no author is known, may be listed as Anonymous.
- xiv.** In case of publications of organizations, learned societies or Government department, the name of the organization, Government department, Ministry or Division be given in place of author, if no author is indicated in the publication.
- xv.** Work of authors, whether individual or joint should be discussed under different topics or headings in the review, i.e. integration and analytical treatment.
- xvi.** There are many systems of writing References in vogue in various sciences and journals. With this end in view, a model list is given in Table 2 to be followed for uniformity in the theses preparation.