

## **Art and Science of Review of Literature**

### Introduction

Review of literature is an integral part of any research. Every research can be considered as a link in the evolution of knowledge. Evolution of knowledge encompasses the accepted knowledge and proceeds through the evolving knowledge. What is known in the discipline needs to be gauged before undertaking any research. The review of literature is a survey of the most relevant and significant academic research on a particular topic in order to reflect the current state of knowledge in the field. However, the scope and purpose of review of literature vary with the context. The most common contexts in which review of literature is demanded are - - (1) A course assignment, (2) A short review for a research article, (3) A review for research proposal, (4) A stand alone review article and (5) A chapter-length review for thesis/dissertation.

Review of literature is an important exercise in the process of identifying and formulating a research problem. Selecting a topic and carrying out research is a subjective enterprise, nevertheless it is a systematic process of enquiry. A critical analysis of the existing research provides researchers an opportunity to minimize errors and think about practical difficulties of data collection and analysis. This leads to strengthening of the scientific approach of eliminating possible short comings in research.

The purpose of review of literature is to convey your reader what knowledge and ideas have been established on a topic, and what their strengths and weaknesses are. As a piece of writing, the literature review must be defined by a guiding concept such as the research objective. It is not just a descriptive list of the material available, or a set of summaries. The researcher is not trying to list all the material published, but to synthesize and evaluate it

according to the guiding concept of the thesis or research question. The review of literature involves two processes - - (1) Selection of the literature and (2) Scrutinizing the studies with respect to five dimensions. The five dimensions are - - Accuracy, Authority, Objectivity, Currency and Coverage. Accuracy refers to the reliability of information available. Authority entails academic credential of the author and the institution to which s/he is affiliated. Objectivity implies the unbiased nature of the information. Currency deals with the time frame of the information made available. Coverage delineates the breadth and depth of the information as will be required in the context.

The above processes will help synthesize results into a summary of what is known and what is not known. Also, the exercise will help identify areas of controversy in the literature. At this point it will be appropriate to focus on the purpose of the literature review detailed above. The length of the review or adequacy of the review of literature will be judged based on the purpose for which the review of literature is done. It is likely that there may be contradicting literature on a particular topic/area. The researcher will have to deal this carefully to alert the reader that such instances are also found in the literature. Often such contradictions result from authors orientation or the theoretical framework relied on. Researcher will have to include and deal with literature with which s/he may not agree with.

There are seven important steps in the task of review of literature. They are - - (1) How to search for studies? (2) How to select studies? (3) How to analyze studies? (4) Which scheme is appropriate for analysis? (5) How to compose/organize review of literature? (6) Scheme of presentation of review and (7) Conclusion. Each of these steps is detailed below.

(1) How to search for literature?

The first phase of review of literature is to identify and effectively locate needed literature. To enable this researcher must develop skills in digging information. Resources are available as hard copies and in digital format. Some of the resources are available in both soft and hard copy format. These documents include - - Standard Books, Academic Journals, Encyclopedia, Survey of Research, Dissertations Abstract International (DAI), Educational Resources Index Catalogue (ERIC), Thesis/Dissertation, Proceedings of conferences/seminars, Reports of Governments, Reports of NGOs, News Letters, etc.

Digital resources are many and billions of textual documents are indexed by each agency. The outcome of website search depends on the search Engine used in tapping the information. Some of the popular search engines are - - Clusty.com, Ask.com, Altavista.com, Google.com, Askusnow.com, Meebo.com, AllTheWeb.com, Inktomi.com, Teoma.com, etc. These search engines will fetch different sets of information.

There are different websites to search for the relevant literature such as [www.Cambride.com/asia/collections](http://www.Cambride.com/asia/collections) [archive.org](http://archive.org); [inlibnet](http://inlibnet); [doaj.org](http://doaj.org) ; Scopus; Pro-Quest (OAJ); British Library – [archive.org/web.web.php](http://archive.org/web.web.php); Jstor; Ebsco; Sage.pub; [Journals.cambridge.com](http://Journals.cambridge.com); Wiley Online Library; IOSR (International Organization of Scientific Research) - JHSS (Journal of Humanities and Social Sciences), Delnet, educational research complete (erc), PsycINFO, EconLit, ERIC (Educational Resources Information Center), FRANCIS, Teacher Reference Center, Web of Science, Assia, EMBASE, Cochraine data bases, Sinahl, Psychological Abstracts, DAI (Dissertation Abstracts International), etc. However, peer-reviewed journals should be preferred as they will carry original research studies which are known as primary sources. Although the review contains mostly original research studies, other resources such as

books and encyclopedia are also helpful in locating original research or in providing background information on the topic.

In any search for literature, it is desirable to use multiple search engines as well as multiple databases. The reason is that the search engines and databases often provide different set of articles/information. During your search for literature, especially when searching for articles in databases, researchers rely very much on keyword searching. To conduct a keyword search, researchers need to formulate a search statement. Then, identify the keywords or the main concepts of the research topic. Think of similar terms (synonyms) or phrases that might also be used to describe these concepts, to ensure that you do not miss out any relevant information. You can use a thesaurus to help find synonyms. For example, you can first arrange the main concepts in columns. Then under each column write down similar terms or phrases that may also be used to represent that concept. Subsequently, you can combine your search terms in a way that a database can understand. To do this, you need to use the words such as AND, OR, NOT, etc (Boolean operators).

In the process of searching literature using multiple search engines and databases, it is highly desirable to keep a record of what you have done to perform the search, such as the search engines/databases you have used, the keywords you have combined and searched, and the search results retrieved using various search statements. From what you have done, you will then know what you should do next. At times certain websites (as a trial period) permit you to download articles free of cost which may be for a month or so. Therefore, keeping track of what you have done is very important for an effective review of literature.

Periodicals are another type of resources which include Trade magazines such as Oil and Gas Investor, Popular magazine such as Newsweek and Newspapers such as the Wall Street Journal. These are of immense value to locate the date of an event which happened in the near past. When you use resources in your literature review, whether the resources are books, journal articles, theses or websites, it is important that you always cite the resources that you use. By citing sources properly, you give credit to those who created the original information resources. By citing the sources and creating proper references you are maintaining academic integrity and academic honesty. Also you allow readers to consult the original resources and prevent plagiarism. Moreover, the work in the field by one researcher is connected with the work of others in the discipline. Now, it is customary that researchers write out names of the databases that they have searched and the period for which the search was conducted. This will help the researcher to defend the outcome of the review of literature.

## (2) How to select studies?

The next phase of review of literature is to evaluate each study with a focus on the research topic/area/variable(s). This will require multi-level scanning with respect to the nature of the journal in which it was published (e.g., Impact Factor), the date of publication, the author of the article, the comprehensiveness of the references given, etc. This evaluation may bring surprises such as conflicting evidences especially in social sciences. The reason may be - - missing or over represented sample, the period for which the literature is reviewed, the different techniques used to locate studies, etc. Therefore, all resources should be explored and as a general convention the review should be conducted for a period of past twenty years.

It is important that the review should not rely too heavily on secondary sources. The review should present materials that are pertinent to the area of research. The literature reviewed should be long enough to demonstrate to the reader that the researcher has a sound understanding of the relationship between what has been done and what will be done.

The problem of selecting studies for review is far more important than collecting studies in a particular area of interest. First of all, details of the source of the article/material are to be documented comprehensively. All elements necessary to provide reference as per the APA Manual will have to be collected before including the study for review. Studies included in reputed journals should be given preference in reviewing the literature. If theoretical framework is an important aspect of the review, then standard books of reputed authors must be consulted.

Information overflow is the problem of these decades and articles of dubious quality must be eliminated. Some of the open domain sites allow anybody to edit/add to the information which will result in poor quality of material. After reading ten to fifteen articles in the topic of interest, researcher will be able to gauge two important things - - (1) which are the journals in which most of the studies in the area of interest are reported and (2) who are the giants of reputation in the field of interest. Since most of the journals provide e-mail address of authors, it is quite easy to contact these persons. There is no short cut to this exercise of reading and getting acquainted with persons and their work whereby the current status of research can be assessed.

(3) How to analyze studies?

A general approach (Jackson, 1980) to analysis has four dimensions - - (a) What is known? (b) How well is it known? (c) How little is known? And (d) What is not known? Indiscriminate acceptance and use of any other research is undesirable. The purpose of analysis

of studies is to infer generalization about an issue from a set of studies. Further, it is important to identify what earlier research has left unattended/unresolved (Cooper, 1982; 1989). Moreover, analysis of studies helps interpret other studies and appraise new methodological developments in the area of interest.

(4) Which scheme is appropriate for analysis?

Jackson (1980) has referred to four categories of review. They are - - listing, excluding, averaging and vote taking. In listing, researcher simply goes on listing the studies which is a simple count or narration of studies. This is done either chronologically or as studies conducted in India and studies conducted abroad. This listing or narration is a futile exercise for it will not generate a better understanding of the field in which the study can be situated. Moreover, this will not require the ingenuity of a researcher.

Researchers often exclude certain studies from their review for unknown reason. There can be several issues in review of literature such as different names of the same construct are used (e.g., Science Achievement), different constructs are sometimes studied under a single name (e.g., Intelligence), any given construct can have different measures and measures have not been validated (Glass, 1977). However, a sound analysis of literature must provide reasons for exclusion.

Researchers often take average of the significant and non-significant studies to infer the trend in the existing literature. Congruence of findings does not assure their validity, and the lack of congruence is not a proof of invalidity. Therefore, congruence should be considered as suggestive and not conclusive. To get a trend from the literature, it is not desirable to count the

number of studies in favor or against by vote taking, for the studies do differ in many dimensions.

#### (5) How to compose/organize review of literature?

There are healthy practices with respect to organizing the review of literature (e.g., Light & Pillemer, 1984). The review of literature should be organized around the question of research. The variables of interest should guide the organization of review. Questions such as to which population can the main findings be generalized? How different are the samples? How different are the methods? How long was the treatment? (if the study is experimental in nature). Answers to these questions will require the skill of interpretation (hermeneutics) on the part of the researcher. A review of literature without any structure to organization will be only a recounting of studies.

On certain occasions, review of literature will generate conflicting evidence. The reason can be attributed to different techniques to locate studies, population of the study not accounted, missing and over represented samples, period for which the literature is reviewed and so on. However, conflicting findings should never be ignored. Researcher will have to examine variations for insight (Light & Pillemer, 1984). It is important to ascertain where and with whom particular findings are likely to hold good?

#### (6) Scheme of presentation of review

Scheme of presentation of review of literature is important because the acquaintance of researcher with the field of investigation is summarized in the review. Depending on the nature of the study, the construct studied may have to be clarified in a tabular format. Some studies will require effect size calculations, if sample size is a matter of concern in summarizing the study. If

the problem suggests a review with respect to variables and their relationships, then the scheme can be in the context of the variables involved in the study.

#### (7) Conclusion

Any review literature must conclude with a summary of the current understanding as evidenced from the literature. Significance of the research question must be substantiated by the exercise of review of literature. Important aspects of the question under research will have to be put in perspective in the background of the available literature. A review of the literature with proper identification, selection and evaluation will be the beacon light for the researcher as well as for those who read the review.

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