

LITERATURE REVIEW GUIDE

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Introduction

Unless a study is based on extensive review of related literature, it may end up being a mere duplication of other studies. Before planning the details of study, educational researchers usually dig into the literature to find out what has been written about the issue at hand and even the opinion of experts and other stakeholders in the field of interest. This guide will describe the meaning, purpose and methods of literature review. It will also describe the variety of tools for reviewing of literature, and how to use those tools for effective literature review in educational research.

What is Literature Review?

One of the major requirements of scientific research is a demonstration by a researcher of thorough understanding of the issues and facts surrounding the problem under investigation. In order to understand the problem at hand, a researcher must obtain and extensively read several information materials that relate directly to the topic under investigation. This is referred to as literature review.


 *A literature review is the systematic identification, location, retrieval, analysis and evaluation of materials containing information that are related to the research problem. It also entails analyses of casual observations and opinions related to the planned research. A researcher should develop a thorough understanding of, and insight into, previous works and trends that have been recorded pertaining to the research problem before embarking on a new study.*

Why Review Literature?

A literature review provides a researcher with the means of getting into the frontiers of a particular field of knowledge. Until one has learnt what has been done and what remains to be done, it is not possible to develop a study that will advance knowledge in that particular field. It is a literature review that forms the basis upon which a significant research should be built. Without an effective literature review, the rest of the research work is likely to be *shallow and naïve*.

Qualities of a Good Literature Review:

- i. Delimits, defines and refines the research problem by isolating key issues pertinent to a study and providing the knowledge needed to convert a tentative problem into a detailed and concise plan of action. It also provides the dimensions and the limits of the problem area and the extent to which the answer is already known.
- ii. Provides insight into methods, measures, subjects and techniques already used, or proven useful or otherwise by other researchers, and thus leads to improvement of design selection.
- iii. Prevents unintended duplication of previous studies by identifying what has already been done, and what needs to be done. What has been done provide the researcher with reliable information on what should be done. Without an effective literature review, a research will most certainly duplicate work that has already been done. By developing a logical framework in which to fit a problem, a literature review therefore forms the foundation upon which all future work must be built.
- iv. Provides a framework for establishing the importance of a study and a benchmark for comparing the results of a study with other studies.

	<p>Use of a literature review depends on the design of a study (qualitative or quantitative).</p> <p>In qualitative studies, literature review can be used to:</p> <ol style="list-style-type: none">i. Frame a problem in the introduction as an orientating framework.ii. Inductively at the end of a study to compare and contrast results, theories, or categories that emerge from a study, especially in grounded theory studies. <p>In quantitative research, literature review can be used:</p> <ol style="list-style-type: none">i. At the beginning of a study to provide direction for research questions, hypotheses and to introduce a problem.ii. Describe the existing literature in detail, usually in a separate section labelled literature review.iii. Deductively at the end of a study to compare results of a study with existing findings as a framework for research questions.
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Sources of Information for Literature Review

Educational researchers need to be familiar with basic types of information sources as they begin to search for information materials related to the research questions. There are three

main sources of information for a literature review: the preliminary, the primary and the secondary sources.

a). Preliminary Sources

Preliminary (or general) sources refer to materials which a researcher consults first to help him or her locate other sources related to the research problem. The preliminary sources are in themselves not information that the researcher is seeking for a literature review, but are just pointers to that information; they direct a researcher where to get information. A table of contents is an example of a preliminary source. One just cannot read the table of contents of a book and claim to have read the book. A table of content is consulted to just identify where a particular content intended for detailed reading is located.

Preliminary sources are usually organized either by subject or by author. Most common preliminary sources are **indexes** and **abstracts** in current areas related to education. Indexes provide the author, topic and place of publication and other materials. It is the equivalent of a catalogue section in a manual library. *Abstracts provide brief summaries* of various publications indicating the author, topic and place of publication. The popular abstracts and indexes in education include Child Development Abstracts and Bibliography, Sociological Abstracts, Resources in Vocational Education, Exceptional Child Education Resources, State Education Journal Index, Business Education Index, Educational Administration Abstracts and Physical Education Index.

The most commonly used preliminary sources in education include:

- i. Educational Resource Information Centre (ERIC), initiated in 1968 by the United States Education Office to transmit findings of current educational research to teachers, administrators, researchers and the public. Two useful preliminary sources published by ERIC are Resource in Education (RIE) and Current Index to Journals in Education (CIJE). CIJE is published monthly, and covers educational journals and periodicals which are not found in RIE.
- ii. Education Index which is published monthly since 1929, except in July and August and contains only bibliographical data from periodicals related to education from over 300 educational publications.
- iii. Psychological Abstracts which is published monthly by the American Psychological Association, and covers over 1,300 journals, technical reports, monographs and other scientific documents.
- iv. Readers Guide to Periodic Literature which is published monthly and is similar to Education index because it contains bibliographic data. It is worth considering

particularly if the study topic extends beyond the field of education. And even though it does not cover the field in depth as Education Index, it includes a much wider range of materials.

- v. Psych INFO is an outline version of Psychological abstracts and covers journals, books, book chapters in psychology and behavioral sciences from January 1967 to present spread in three fields of 1967-1983, 1984-1993, and 1994 to present.

There are other commonly used preliminary sources which are not specific to education. These include:

- i. Citation Indexes; which trace the effect of early publications on subsequent research. An easy way to locate works that have cited an earlier article is to check the Science Citation Index (SCI) or Social Science Citation Index (SSCI).
- ii. Smithsonian Science Information Exchange (SSIE) which provides information on recently completed projects or ongoing research projects. There is a considerable lag between the time a research project is completed and the time it is indexed in the preliminary sources such as Psychological Abstracts. To obtain information on recently completed and ongoing projects in an area of interest, SSIE is the best preliminary source.
- iii. Bibliographies and Reviews of Research Literature are recent reviews of literature related to a research topic. If a researcher can locate a recent review of literature related to his or her research topic, he or she can obtain useful overview with very little effort. The qualities of such reviews however vary and there is need for critical examination before accepting their conclusions.
- iv. Theses and Dissertations. Since most theses and dissertations are never published, it is important for a researcher to consult the following sources for thorough coverage:
 - a. Dissertation Abstract International (DAI); a monthly compilation on doctoral dissertations submitted by over 500 cooperating institutions in the United States and Canada.
 - b. Comprehensive Dissertation Index; which provides subject and authors covering virtually every doctoral dissertation accepted in the United States and Canada.
 - c. Masters Theses in Education; which lists authors, titles and institutions of masters theses by all institutions in the United States and Canada that offer masters degrees in education.

b). Primary Sources

A primary source is a material of direct description of an occurrence by an individual who actually experienced the occurrence and where an author communicates his or her findings directly to readers. In educational research, this generally means description of a study by persons who actually carried it out. Primary sources include journals, reports, dissertations and theses, and conference papers. The common primary sources in education are Journal of Educational Research, Journal of Research in Science Teaching, and Journal of Higher Education and Management among others.

These journals are usually published monthly or quarterly and the articles in them typically report on particular research area. Primary sources are preferred because they provide detailed accounts of events in specialized fields. But they have narrow scopes because they provide a lot of details in small specific areas.

c). Secondary Sources

Secondary sources are materials where authors discuss or describe the works of other authors. They are works presented by people who were not direct observers or participants in the events being described, but who are merely reporting on the work of someone else. The most popular secondary sources are textbooks, and Encyclopedia. In a textbook of Educational Management for example, an author may describe several studies that have been done on education as a way of illustrating an idea or a concept. But the author did not personally conduct the studies referred to. Educational researchers who seek information on given topics would refer to general sources to locate the relevant primary sources and secondary sources. A secondary source is good for overview of the problem at hand, and a primary source for detailed information about the research.

The commonly used secondary sources in education research include Encyclopedia of Educational Research, Handbook of Research on Teaching, National Society for the Study of Education (NSSE), Yearbooks, Review of Educational Research, Review of Research in Education, Subject Guide to Books in Print. These secondary sources contain reviews of research on various important issues in education.

A secondary source combine knowledge from many primary sources into a single publication and eliminates and simplifies much of the technical materials that may not be of interest to the general readers, and present a quick and relatively easy method of obtaining a good overall understanding of the field. However, with a secondary source, one cannot be sure of the changes that have been made from the original source by the secondary author. In the process of combining and simplifying many primary sources, a secondary source may

leave out information that the reviewer may need to know. Therefore, a literature review should, whenever possible, be based on primary source.

The Literature Review Process

A literature review must be relevant. To be relevant, *it should address the variables raised in the purpose, objectives, hypotheses and research questions of a study*. Hence it must take into account the purpose, objectives and the hypotheses (or the research questions) of the study before embarking on a study. A purpose states the overall intention of a study; the objectives specify the intended outcomes or the steps to be followed; research questions provide the direction which the research will take in achieving each specific objective and state the issues at hand; while the hypotheses state the variables to be tested. All these form the core elements of a research and the focus of a good literature review. Without such a focus, a literature review would be judged irrelevant.



A proper literature review should proceed in two phases. The first phase is conducted during exploration and before a proposal is developed to help identify and define the problem. It provides the dimensions and the limits of the problem area by defining the extent to which the answer is already known. It also identifies possible procedures from solving the problem. The second phase is conducted after a problem is already identified.

A literature search can be *manual* - using traditional paper approach or it can be *electronically* conducted, by means of a computer. The most popular search approach these days is the electronic method.

a). Manual Search

For an effective review of literature, it is important for a researcher to determine and prioritize the literature to be reviewed, because it is not possible to read everything or anything. There are certain generally accepted steps to be followed in an effective manual literature search. The researcher should:

- i. Define the research problem in a short, precise and clear statement. A good definition is vital because it prevents the researcher from wasting time consulting irrelevant sources by focusing on the issue of investigation.
- ii. Review secondary sources: Peruse one or two secondary sources to obtain an overview and insight into previous works and define the problem into more precise terms.
- iii. Select and peruse through the most appropriate preliminary sources to identify particular primary sources related to the questions or the problem.
- iv. Formulate search words (or descriptors): These are words or phrases that are pertinent to the research topic and make identification of information in indexes easier, and help to

determine the most appropriate primary sources. These are usually the most important words in the problem statement (but more particularly, the variables in the conceptual framework). Such key words and their synonyms should be listed alphabetically and the articles that contain the descriptors determined.

v. Systematically search the preliminary sources for the most relevant primary sources, beginning with the most recent which is likely to refer to other earlier publications. Make use of bibliography cards (see 3.5).

vi. Locate, obtain and read the relevant primary sources in detail, taking notes by use of note cards. Most primary sources are located in journals or reports. It is a good practice to start reading from the most recent articles and work backwards as recent articles are likely to refer to earlier articles and provide a quick understanding of previous works.

The abstracts and summaries should be read first as this helps to determine whether the articles are worth reading in its entirety or not, being as brief as possible, but without excluding anything that might be important later in the final review.

vii. Organize the notes; and write the report.

b). Computer Search

A computer literature search can be performed in almost all university and public libraries and even on personal computers where an online terminal is linked to one or more information retrieval systems such as Lockheed DIALOG systems and several other information retrieval services that retrieve information from a number of data bases. The popular data bases in education are ERIC, but Psychological Abstracts, Exceptional Child Education Resource, and Comprehensive Dissertation Index can also be retrieved from Lockheed retrieval systems.



The steps involved in a computer search as similar to those in a manual search except that in a computer search, much of the work is done by a computer.

In conducting g a computer search, a researcher should:

- i. Define the problem.
- ii. Decide on the extent for the search by delimiting the number of articles required, or by indicating how far back the search should go.
- iii. Decide on the data base. There are over 200 data bases that can be computer searched, but then most common data for educational research is ERIC.
- iv. Select descriptors to tell the computer what to do. The descriptors should be as separate as possible to avoid producing too many references most of which may be irrelevant. But if

the descriptors are too narrow, some significant and relevant references may be left out. The descriptors can be used singly or in combination – using relevant Boolean operators of “and”, “or”, and “not”. Using “A or B” would produce references that contain either “A” or “B”, and both “A” and “B”. All sorts of combinations are possible with “and” and “or” notations. For example, a researcher could search for “(A or B)” and “(C or D)”.

- vi. Conduct the search by entering the descriptors in a computer using suitable software such as the Boolean search.
- vii. Obtain a print of the desired references.

Computer search can also be conducted on the worldwide web, or internet. An educational researcher can find information on almost any topic of interest on the web. Most information in the web are categorized into directories, and there are also several search engines available. A directory groups web sites together under similar categories in the manner in which libraries group similar information resources together. The common internet search engines include AltaVista, Execute, HotBot, Infoseek, Lycos, Yahoo, and Google among others. The web provides educational researchers with immediate access to a wide variety of current information in varied formats. The internet is open 24 hours and information can be viewed at the pleasure of a researcher. But most such information lack credibility as anyone can publish anything on the internet. However, it is fast, largely inexpensive even where it is not free, and a computer can use several descriptors at a go.

Reporting Literature

In reporting literature, a researcher should bear in mind that he or she is using someone else’s ideas to investigate a problem of interest. Since the circumstances of the researcher and of the report he or she is reviewing may be different, as is usually the case, it is important to report in enough detail. Therefore, the reporting should be:

- i. Objective and should not contain exaggerated information. The content of the review must be what the researcher reviews, not his own experiences, or opinions. If the researcher expresses his or her opinions as should happen, those opinions must originate from the review.
- ii. Clear, and should report findings as findings, conclusion as conclusion, and recommendations as recommendations.
- iii. Specific and report findings, conclusion, and recommendations that are applicable to the current study.

- iv. Relevant and the researcher should make clear how the study being reviewed relates directly to the problem being investigated.

*Students of educational research usually have difficulties deciding how much literature is sufficient for a scholarly study, and how to organize notes into a meaningful literature review. Clearly, one does not have to read every document in the name of literature review. And because it is not possible to read everything, knowing what to abstract and how to abstract quickly becomes an important issue when one is reviewing literature. Although there is no universal structure for a good literature review, it is given that **a good review must be related to the objectives, questions and hypotheses of the study.** Another difficulty experienced by most students is how to select and extract relevant part of literature to incorporate in the review. A researcher must make a decision on this anyway as all materials are not necessarily relevant.*



In selecting information materials for a literature review, a researcher should consider:

- i. The variables to be investigated (e.g. remuneration and motivation), and their elements (e.g. basic salary, housing, health and pension schemes.)
- ii. The subjects or units to be used in the study (e.g. teachers).
- iii. Setting of the study (e.g. primary schools).
- iv. Time factor (the more recent the better, but not always).
- v. Methodology of the study; and
- vi. Potential problems areas of the study.

NB: A well done literature review should have an introduction, the body, summary and a conclusion.

a). The Introduction

The introduction is a sort of a narrative hook that provides an overview of the problem at hand and draws the reader into the study by highlighting the issues to be considered in the review and why it is important to investigate them. There are several approaches to writing an introduction of every chapter, but the common techniques include the advanced organizer approach, the narrative hook technique, the broad question approach, and review of the previous chapter.

A general format of an introduction, using the advanced organizer approach, may take the form of:



This chapter discusses the literature related to the . . . (*topic/purpose of the study*), with particular focus on . . . (*summarize the objectives/variables of the study*). These are important because . . . (*provide further insight into the review*).

Note. Regardless of the approach adopted, the introduction should be completed in one brief, precise and concise paragraph.

b). The Body of a Literature Review

The body of a review reports what others have found or think about the independent and the dependent variables of the study. Literature on the independent variable should be presented along research objectives. Thus if a study has five objectives, then there should be five sub-sections, each focusing on an objective.

Under each sub-section, a researcher should:

1. Provide definitions of the variable from authoritative sources using appropriate citations. The researcher should:
 - i. Consider the differences and similarities among the definitions.
 - ii. Consider the implications of the definitions.
 - iii. Provide a working definition of the variable in the study.




Remember that the first section of each subtitle provide definitions of the terms in the subtitle.

2. Describe and discuss the ideal relationship between the variables (e.g. basic salary and motivation) as relate to theory, practice and principles advanced by other authorities, and supported by suitable citations. The researcher should:
 - i. Consider the differences and similarities between the propositions, laws, principles, methods, practices or theories, accepted as ideal.
 - ii. Consider the implication of the propositions, propositions, laws, principles, methods, practices or theories accepted as ideal on the independent variable.
 - iii. Provide a working structure of the relationship between the variables in the study.

3. Describe related studies in the local and the non-local contexts, highlighting the ***gaps which need to be filled*** by your study, and pointing out the weaknesses of the studies or the deficiencies in the literature. If there are no deficiencies, then there is no need for your study. In pointing out the ***deficiencies, consider areas overlooked by the past studies*** and point out how the present study has or will address them. The researcher should particularly consider:

- i. The weaknesses of the research methodologies with respect to the inadequacies or inappropriateness of the population and sampling techniques, sample size, research design, and data analyses techniques.
- ii. Findings; how credible or outrageous they are; and whether or not they concur with accepted theories.
- iii. Conclusions; whether they are valid and significant or not.
- iv. Recommendations; whether they are valid, applicable, and relevant.

-  1. This section can be presented as a series of short paragraphs that identify several shortcomings of the past studies, or it may just focus on a single shortcoming and discuss how past studies have overlooked or bypassed it.
2. Each subtitle of the independent variable should be discussed in at least three (3) paragraphs. The first paragraph of each subtitle should present the concepts or definitions, the second theories and the third related studies. A review of literature which does not proceed this way will end up being narrative rather than analytical and must be avoided.


The body of a literature review may also contain scholarly literature related to the dependent variable. Since the subtitles of a literature review are derived directly from the objectives, the literature review chapter should be arranged to reflect this.

c). Summary

In the summary, the researcher ties together the main issues revealed in the literature and present a composite picture of what is known or thought about the issue under investigation to date. A summary is a recapitulation of the main issues of the review, indicating tentative answers to the problem, and a basis for the hypotheses.

d). Conclusion

In the conclusion, the researcher presents appropriate courses of action to be taken to try to solve the problem, based on the knowledge revealed from the review. A conclusion provides tentative answers to the research questions following the discoveries from the review.


-  The conclusion and the summary may be treated as separate sections under separate subtitles, as indicated above, or they may be presented in small precise paragraphs at the end of the last subtitle. The researcher should follow the advice of the organisation for which the study is intended.

Tools for Literature Review

For quick note-taking and easy organization and summary, it is advisable to use bibliography cards - of approximately 10cm X 15cm, or 12cm X 17cm, which are available commercially. A researcher should prepare a bibliography card for each information material consulted. The card should contain:

- i. The problem, which should be listed verbatim as the author puts it.
- ii. Hypotheses, objectives, questions which should be listed exactly as they appear in the reviewed material.
- iii. Procedures; describing the methodology that was used (e.g. case study, survey, etc), including the number of participants and how they were selected, the kind of instruments used and any unusual technique employed.
- iv. The major findings of the study, indicating whether the objectives were achieved and the questions answered. If the findings are summarized in a table, it is advisable to photocopy the table and attach it to the card.
- v. Conclusions; including any agreement or disagreement that the researcher may have with the author regarding any of the issues considered above and, reasons for the agreement or disagreement.

This information should appear on one phase of the bibliography card. The other face of a bibliography note card should display the following information:

	<ul style="list-style-type: none">- Problem- Objectives- Hypotheses/Questions- Methodology Include the design, sample size, instruments and any unusual techniques used.- Findings Major finding indicating whether the objectives were achieved or the hypotheses were supported.- Conclusion State the conclusion and indicate any disagreement with it and the reasons for the agreement or disagreement.- Comments Particularly its strengths and weaknesses of the study that makes it applicable or not for the study.
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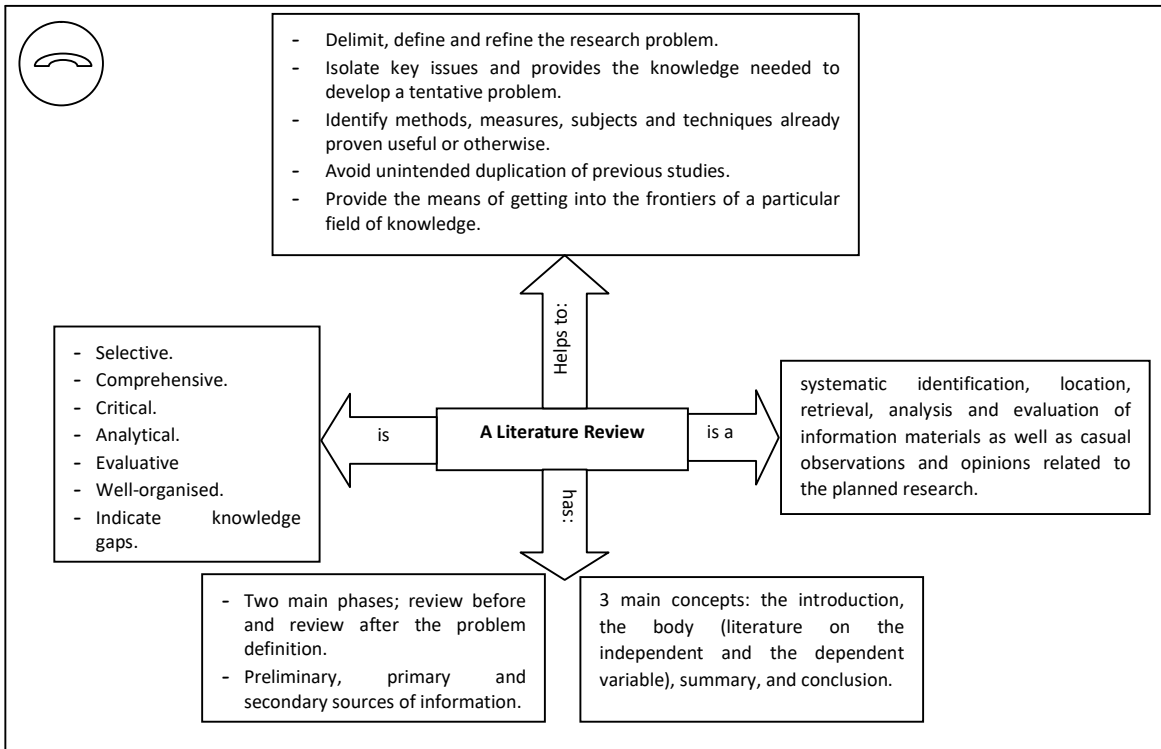
A basic requirement in reviewing literature is the use of an appropriate and acceptable reference style. There are many styles of writing like the American Psychological Association, The Oxford Manual of Style, The University of Chicago - A Manual of Style; Turabian; and The Harvard Styles, and Campbell and Ballon Styles among others. The

referencing styles differ from institution to institution, and it is important to seek guidance from the authorities supporting research on the appropriate style for scholarly writing. Each manual dictates different procedures in text citations; end of text citations, referencing, headings, tables, figures, and quotations among other details. However, articles in the field of education commonly follow the publication manual of the American Psychological Association.

NB: A good literature review should be selective, comprehensive, critical, analytical and evaluative, well-organised and indicate the knowledge gaps to be filled by the study.

When reviewing literature, a researcher should:

- i. Begin with the most recent studies and then work backwards.
- ii. Read the abstracts first to see if they address the problem area.
- iii. Skim the report to find sections related to the study.
- iv. Make notes on bibliography cards. Write complete bibliography entry for each reference.
Put only one reference on each card to help sorting.
- v. Note direct quotes and paraphrases to prevent inadvertent plagiarism. Separate the author's evaluation of the research from his or her own.



Conclusion

If you follow this guide, you will be able to come up with a good literature review.



I'm Dr. Anderson and I am a professional research writer, coach, mentor proofreader, and editor with over twelve years of experience. My expertise cuts across many fields of study. I am passionate about research and guiding research students. I provide personalized research services and customer satisfaction is my utmost priority. I don't compromise on quality, plagiarism, and deadlines. If you need help with research, get in touch at

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