

**PROJECT/THESIS WRITING  
SIMPLIFIED**

**Edited by**

**PROF. EUNICE A. C. OKEKE**

**AND**

**DR. GRACE C. OFFORMA**

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## Review Questions

Let us see how well we have understood the content of this chapter. We shall do so by attempting to answer the questions below.

- 1) What are included in the background of the study?
- 2) Choose a research topic and write the background to the study.
- 3) What is a research problem?
- 4) Write the problem of the chosen research topic.
- 5) What do you understand as the significance of the study?
- 6) What are the things to be included in the significance of the study?
- 7) How will you state the rationale for your study?
- 8) For your chosen research topic, write the purpose of the study
- 9) How is the scope of the study written?
- 10) Differentiate between scope, delineation and delimitation.
- 11) How are unfamiliar terms defined or explained in a research?
- 12) Outline the components of **introduction** in a project/thesis writing.
- 13) List the *five chapters* of a project or thesis.
- 14) Explain the content of *chapters two to five*.

## CHAPTER FIVE

### REVIEW OF LITERATURE

#### *Objectives*

**This chapter discusses the process of reviewing literature.**

After reading this chapter, you should be able to:

- Define the term "Review of Literature";
- Explain the need for Literature Review in Research;
- Name the sources of information in research literature; (Primary, Secondary and Preliminary), giving at least two examples of each source type.
- Describe how each of these named sources of information can be located and used;
- Describe the steps taken in searching the sources or conducting a review of literature;
- Describe the recommended strategies for reading and making notes on literature articles.
- Discuss how to evaluate previous research or theoretical work being reviewed;
- Describe the organization of literature review, citing examples.
- Using examples, explain citation formats in text.

#### *Introduction*

**This chapter will be discussed under the following sub-headings.**

1. Meaning of Review of Literature Research

2. **Need for Review of Literature.**
3. **Sources of Relevant Information in Review of Literature**
  - **Primary Source**
  - **Secondary Source**
  - **Preliminary Source**

**Use of Computers for search of Preliminary sources.**
4. **Steps in Reviewing Education Literature**
5. **Organization and writing of Literature Review Report.**
6. **Citation Formats in Text.**

### ***Meaning of Review of Literature in Research***

**Review of literature is a systematic process of locating and studying all the existing works relevant to the area of research under study. In this exercise, the researcher tries to identify, locate and read sources of relevant information, evaluate, make notes based on these relevant documents on the research topic as well as write up the report of the work done/the review of literature.**

### ***Need for Review of Literature***

**The review of literature is a very important exercise due to the following reasons:**

**Educational Research has generated much useful pieces of information or knowledge that can be of immense help to the**

educator and student. A review of literature in any area of study will help to identify the source of information and knowledge in that area.

When the researcher identifies and reads these sources of information in the area of study, she/he acquires much knowledge about the problem under investigation, and this can be weighed and interpreted in terms of the local situation.

Review of literature will help the researcher identify the extent of work done in the area of the problem at hand. He notes the findings of previous research work as well as other significant issues. This helps to sharpen the researcher's focus so that he can properly delineate the scope of his research and avoid unnecessary waste of time and energy in carrying out an irrelevant study. Thus the review of literature will help one identify and carry out meaningful and relevant study whose results will be more profitable to the society.

In reviewing the literature, the researcher becomes aware of research questions, hypotheses and methods already used in previous related studies, as well as their extent of appropriateness and usability. The researcher is now in a better position to avoid previous lapses or approaches that are obsolete and unproductive. Literature review thereby enhances or enriches the methodology of a research. The researcher, by reviewing literature can formulate

better hypothesis, thereby enhancing the appropriateness and usefulness of the results.

Review of literature helps the researcher to evaluate previous work. Proper evaluation of previous work will not only help save time by elimination of work not properly done, it can also help identify and select certain aspects of work that are good, thereby enhancing the possibility of the researcher carrying out a more useful work.

Finally literature review can help the researcher immensely by providing him/her the theoretical framework of his study.

### *Sources of Relevant Information in Review of Literature*

In order to locate and use educational research, the researcher has to be familiar with three major sources of information. These are:

- a) Primary sources;
- b) Secondary sources,
- c) Preliminary sources.

***Primary Sources:*** These are those publications or articles in which persons who carry out research, report their findings. Thus primary sources communicate information



directly from the researcher to the reader, about an event or a phenomenon.

*Types of Primary Sources:* Major types include:

a) **Periodicals** such as

- (i) Professional Journals,
- (ii) Magazines, Newspapers, etc.

Professional Journals contain published reports of research in education and other fields of study. Journals are issued at regular intervals. They contain articles on subjects of concern to a particular branch of knowledge. Journals emphasize reports of original research studies. Other articles included are theory or opinion articles and/or articles describing new knowledge programs or the direct experiences of the authors.

(iii) Magazines and Newspapers which are published at shorter intervals can be primary sources when they have original reports of authors reported directly by them.

b) **Reports:**

Many of important research findings and theoretical papers in education are first published as reports. When agencies and governments support or finance a project, they demand for reports which they then publish. These reports range from reports of small scale projects to national policy statements made by government and agencies. Most of these reports are abstracted in "Documents Resume"

section of Resources in Education (RIE) and microfiche copies are distributed to the colleges and university libraries.

**c) Scholarly Books and Monograph:**

Research or theoretical works of major importance can sometimes be further developed and expanded into scholarly books or monograph.

NB: Note that Books are also often classified as secondary sources, but where it is a compilation or original research work or theoretical work, opinion, etc., then they belong to primary source.

**d) Thesis and Doctoral Dissertations:** These are students' research works and are therefore primary sources. These abound in university and college libraries.

**e) Non Book Materials:** Such sources of information include various types of audio-visual materials, microfiche, slides, films, photograph, records etc.

*Secondary Sources*

These are publications in which the author is reporting on research carried out by someone else. The most common secondary sources in education are scholarly books and textbooks, dictionaries, encyclopedia, reviews of research, reports, etc.

In these secondary sources, the author usually pull together pieces of information and discusses the results of research or theo-

retical works. In so doing, he brings his own interpretations, viewpoints and prejudices to bear in the primary materials (Nworgu, 1991).

Secondary sources are of advantage in that they give the reader a quick and readable overview of research and opinions related to the education topics covered (Borg, 1981).

The disadvantage lies in the fact that authors may not accurately report the findings. Also, the report may be brief, hence excluding some important pieces of information which the researcher may need; or sometimes issues may not be well clarified. However, since the references are given, the researcher can try to read the primary sources where the work is relevant to the problem under investigation.

Examples of secondary sources include books, dictionaries, reviews, encyclopaedia, etc.

### *Types of Secondary Sources*

#### **Reference Books**

These are of two types:

- i. The source type; which contain direct information needed by a researcher e.g. encyclopaedia, dictionaries, handbooks, biographical dictionaries, yearbooks, atlases and gazettes.
- ii. Those that refer the user to the source of information.

required. These include indexes, abstracts, etc. and are called *access type*.

### *Preliminary Sources*

These are sources used to locate books and articles that relate to the problem under investigation. There are several preliminary sources that are useful to educators. However, four of them will be emphasized here. These can all be searched manually.

#### *a. Resources in Education (RIE):-*

This is published monthly by the Educational Resources Information Centre (ERIC) in U. S. A. since 1996. RIE reviews report literature. These Report-literature are educational documents other than journals and include speeches given at professional meetings, final reports of federally funded research, state education documents, school district reports and other published and unpublished reports.

#### *b. Catalogue:*

A catalogue is a list or enumeration of name, objects, etc. usually in alphabetical order. The catalogue is the most used preliminary source. It is the heart of all library activities and is the information bank into which information is fed and from which information is retrieved. It should have information of all materials held in a library, whether it is on shelf or loaned, whether it is

a book or non-book material. Through the use of catalogue, retrieving materials becomes easier.

In Nigeria, the most popular type of catalogue is the card catalogue. The card catalogue is a series of cards arranged alphabetically and filed in small drawers in the library. Each book/material in the library thus should have:-

- i. a title card or title catalogue;
- ii. an author card or author catalogue;
- iii. a subject card or subject catalogue.

c. *Indexes:-*

An index is a systematically arranged list giving information that would lead to an easy identification and retrieval of an article or material. Indexes of such articles are usually arranged according to subject area (subject index) or author (author index).

While the subject index has the following entries: subject area (which serves as an identifier), the title of the article, place of publication, page, etc., the author index has as entries, the name(s) of author(s), title of article, year and place of publication and publisher, etc.

We can have:-

- i. Indexes to indexes;
- ii. Indexes to collections;

- iii. Periodical indexes;
- iv. Newspaper indexes; and
- v. Pamphlet indexes.

(Ejimkonye et al, 1990)

d. *Abstracts:*

An abstract is usually a brief summary of a published article, as well as other pieces of information, that will help in their identification and retrieval. The brief summary of the work highlights the purpose of the study, a brief description of its methodology, major findings, conclusions drawn, etc. Some abstracts can on the other hand be brief giving only titles and bibliographical details and the general nature of the work.

Abstracts are important preliminary sources. Some people seem to be satisfied with reading them since they give insight to works; and where necessary, they locate the original work(s).

Examples of abstracts include Psychological Abstract, Sociological Abstract and Dissertation Abstract International (DAI).

The preliminary sources so described can be manually searched. However, the computer can be used where it is available, for searches of preliminary sources.

### *Steps in Reviewing Educational Literature*

### *Defining the Problem:-*

The first step in locating relevant research information is to define your problem precisely and as clearly and specifically as you can.

### *Reviewing Secondary Resources:-*

Here, the researcher reviews briefly the problem area in one or two secondary sources. This gives one an introduction to the problem and helps one redefine it in more precise terms.

### *Translating Problem Statement Into Key Words:-*

Here you identify and list the key words or descriptions associated with the topic of the study. The few secondary sources reviewed in steps 2 above can also be of help in carrying out this task.

### *Consulting and Searching Preliminary Sources:-*

Having identified and selected the key words, you should consult or search preliminary sources. Here one decides whether to conduct a manual or computer search. Then follow a systematic search procedure and make bibliography cards (also called index cards) on primary and secondary source references that you find in the preliminary search that relate to your work. Locate and code these references located, to indicate their importance. The coding system should be keyed by researcher.

### *Locating the Primary Source:-*

Locate the primary sources (Journals, textbooks, etc.) in the serial section of the library or in any other place using the bibliographical cards. If your school library does not have important material needed for the research, you can get them by inter-library loan services applied for by the researcher through the library. This can cost the researcher a little money.

### *Reading the Primary Sources and Making notes on Cards:*

Review of primary sources should start with the most recent of the important studies as indicated by your coding in step iv. This is because most recent ones will have the older research studies as their foundation, hence they are likely to be more valuable. By reading these more important articles first, the researcher quickly builds up a deep understanding of the problem and this gives him a better advantage. He can then read other related works peripherally and can be in a position to fit the later in the overall picture.

Before one starts reading the primary sources, he/she should purchase or make index cards on which to make notes.

In taking notes on the primary sources or any other material, the researcher should be as brief as possible. However he/she should not omit anything that will be relevant to the study.



In reading and making notes during the review of literature, hypotheses of the study should be copied verbatim onto the note card since they are usually short. Under the procedure, the reviewer should describe the research method used (whether experimental, quasi-experimental, historical, survey or correlational, etc). Also, the research subjects, sampling and sampling techniques should be briefly described. Measures used for collection of data (e.g. questionnaires, interviews, standardized tests, observation forms, etc.) should be equally described. Measures used for analysis of data should be briefly listed along with their levels of statistical significance. While reading, it is also desirable and important that one identifies and records his/her evaluation of the research study being reviewed at that time, when the idea is still fresh in his/her mind. Critical evaluation should be made, e.g. in terms of relevance of work to problem; "clarity worth and testability of the stated hypotheses" adequacy and appropriateness of sample, sampling techniques and instruments for data collection; as well as availability, validity and reliability of the measuring instruments used.

The statistical measures used for analysis should be also evaluated. Apart from these, critical evaluation should also include noting any promising or unusual and new techniques employed in the study, or even interesting theoretical points as well as any apparent problems, weakness or strong points.

A critical evaluation of your reviewed work is important since it will not only help you identify the relevance of the work being reviewed to your problem; but will also enable you find out which of any conflicting results found in related results are more likely to be correct. This evaluation can be briefly stated last or included in comments.

Apart from journals, one can review theoretical and opinion articles. These do not follow the format of research papers. In reviewing these materials, the researcher should first scan the article to get some idea of its content and then decide whether to read the entire work (if very relevant) or just the relevant aspects. Theoretical and opinion articles can be of value to the researcher since they give the person an insight into the work as well as further understanding of the problem. Experience from them can also help form the theoretical framework of your study.

All other forms of important literature should be as much as possible reviewed. Examples include magazines and newspapers. These usually contain pertinent articles that can be of use and are relevant to your study.

When reading articles being reviewed, one should also identify quotations that can be useful in writing the literature review. These should be carefully copied into the note cards, enclosed in quotation marks and the page from which it is taken identified and

copied out as well as the author of material, date of publication, etc. For details see the section on 'citation' later in this chapter.

### *Organizing of Notes:-*

After note taking of reviewed articles, the researcher then organizes the notes. Just as you have coded your preliminary sources according to, may be your key words or sub-headings, the note taking of the review of articles should be done bearing this in mind. Articles should be coded according to type and content. This will help in organizing the note cards so that related reviewed articles can be placed in succession according to their sub-headings and order of importance.

All articles reviewed should then be weighed, combined and organized so as to give you the best answer available to your problem when eventually written down.

### *Writing The Report (Literature Review)*

The write-up or report of literature review should be a critical appraisal of the state of the art in the area of your study. The function of the report is to give your readers an overall picture of the state of knowledge about the problem being investigated. The report should indicate that the researcher has not only clearly understood the problem but has integrated and interpreted the rela

issues effectively. In so doing, the ideas should not be disjointly put but there has to be a flow of ideas in accordance with the trend(s) of thought."

The sections under the major body can include:

- (a) Theoretical framework of the study,
- (b) Emperical studies.

Each of these sections can have its own sub-sections.

In writing the main body of the literature, the following guide-lines should be borne in mind:

- (a) Discuss major studies in detail but devote less time and space to minor studies.
- (b) If you have reviewed so many minor studies that have the same type of findings, discuss them together; e.g. one can say, "several other studies (Okeke, 1999; Nwosu, 1996; Onyegebu, 1993; Nzewi, 1991; Obi, 1989) have reported that ...";
- (c) Do not use a specific pattern in writing your report or stating your paragraphs. For example *starting paragraphs with names of researcher*: e.g. paragraph 1, "Obi (1989) found that ... Paragraph 2" Offorma (1985) in her study of ...
- (d) Avoid repetition of words. Try to use synonyms; e.g. studied, investigated, researched, etc.
- (e) Use short sentences as much as possible.

- (f) Avoid the use of jargons and pendent expressions.
- (g) There should be sequence and flow of ideas in your discussion. Include transition sentences to connect main ideas or sub-topics discussed.
- (h) Discuss the major methods used in the various studies and the limitations of important studies objectively so that the reader has ample information about the work to enable him/her weigh the results and draw his/her own conclusions.

Summary of Literature Reviewed - Here the researcher pulls together all the findings relevant to the study and which have been discussed. The researcher's views about these studies or findings are also stated and conclusions made. The place of the researcher's own work in filling the gap in literature in the problem area should be well identified and explained.

### *Citation in Text*

In carrying out a research study, the researcher consults so many reference materials such as journals, books, magazines etc. The sources of these ideas have to be acknowledged by the researcher in writing the Literature Review. Hence she/he cites the reference materials in the text. Apart from serving as acknowledgement to

the original source of information, citation also helps in providing information that will help identify and retrieve the source of information.

Citations are not haphazardly done. There are standard and approved formats of citations. These include (according to Nworgu, 1991), the following:-

- (1) American Psychological Association (A.P.A.)
- (2) Turabian, Kate, L.
- (3) Modern Language Association of America (M.L.A.A.)
- (4) National Educational Association of the United States (N.E.A.).
- (5) Ballou, Stephen V.

There are still other formats in existence. No one format can be said to be better than others. However, some areas of study prefer the use of some styles. In the Behavioural Sciences including Education, the A.P.A. format is preferred and mainly used.

In this work, it is the A.P.A. format of citation that will be discussed.

Ideas from referenced materials, tables, etc. can either be lifted verbatim or paraphrased. The A.P.A. citation format takes care of such cases whether it be by one author or many authors. The A.P.A. citation format uses the author-date method.

Here the surname(s) of the author(s) and the year of publication are normally cited at the appropriate place in the text. Here are some examples of citations according to A.P.A. format.

***One Work by One author.***

Here the surname only of the author is used. No suffix, e.g. Dr. or the initials are included. The year of publication is also inserted in the appropriate place.

- (a) If the name of the author appears as part of the narrative, cite only the surname and then the year of publication in parenthesis as follows: Adiele (1998) demonstrated that achievement in mathematics .....

or

According to Adiele (1999), achievement in mathematics.....

- (b) If the name of the author does not form part of the narrative, both the name and publication date are put in parenthesis with a comma separating the name and date as shown below:

It has been demonstrated (Adiele, 1998) that achievement in mathematics .....

- (c) In the rare case in which both the author and the year of publication form part of the narrative or textual discus

sion, both the name and the date are put in parenthesis  
e.g. Adiele, in 1998 demonstrated that achievement  
in mathematics ....

or

In 1998, Adiele demonstrated that achievement in  
mathematics .....

- (d) Where a work has been cited earlier and it is cited  
again within the same paragraph, only the authors'  
name without the year is cited the subsequent time,  
provided that the work will not be confused with  
another work cited in the work or thesis; e.g.

In a recent study on achievement in mathematics,  
Adiele (1998) demonstrated that .....  
Adiele also reported that .....

### ***One work by Multiple Authors***

- (a) When a work has two authors only, always cite both  
names every time the reference occurs in the text; eg.  
Nwosu and Okeke (1996) demonstrated that.....
- (b) When a work has three or four or five authors, cite all  
authors the first time the reference occurs. But in subsequent



citations include only the name of the first author followed by 'et al' (which is not underline and must have a period after et al) and the year if it is the first citation of the reference within a paragraph. For example

(i) First citation:

Nzewi, Onyegegbu, Okwor and Uzoma  
(1998) found that .....

(ii) Subsequent citation thereafter per paragraph

Nzewi et al (1998) found that .....

(iii) In subsequent citation within the same paragraph omit year as shown below:

Nzewi et al. found that .....

(c) If two references with the same year and having almost the same authors have been shortened to the same form (e.g Both Nzewi, Onyegegbu & Okwor 1998 and Nzewi, Onyegegbu, Okwor & Ossai, 1998 have been shortened to Nzewi, et al, 1998), cite all the surnames of the first authors and as many of the subsequent authors as necessary to distinguish the two reference: then follow this by a comma and "et al." e.g. Nzewi, Onyegegbu, et al. (1998).

- (d) One work by six or more authors should be cited showing only the surname of the first author followed by “et al.” (not underlined and with a period after ‘al’); and the year for the first and subsequent citation. (In the reference list however, provide the initials and surnames of each author; e.g. Okechukwu et al.. (1996) found that ... If two references with six or more authors have been shorten to the same form, cite the surnames of the first authors as are necessary to distinguish between the two references; followed by “et al.”

### ***Groups As Authors***

When corporations, associations, government agencies and study groups serve as authors, their names are usually spelt out each time they appear in a text citation and may be abbreviated thereafter in subsequent citations if the name can be abbreviated or where the abbreviation is familiar or can be readily understood.

- (a) Examples of citing an association/group author that is readily identified by abbreviation

- (i) (Science Teachers Association of Nigeria.(STAN, 1992.  
(*Subsequent citations*) (STAN, 1992)

or

- (ii) Federal Ministry of Education (FME), 1981  
(*Subsequent citations*) (FME, 1981

- (b) Where the name is short and the abbreviation will not be readily understandable, write the name in full, with a comma; then date all in parenthesis even in subsequent citation.

- (iii) E.g (University of Nairobi, 1996)

### *Authors with the Same Surname*

When a work includes publication by two or more primary authors with the same surname, include the first author's initials in all text citation, even if the year of publication differs. This will help to avoid confusion for readers and it will then be easier to locate the entry in the list of references. Example:

- (a) A.D. Nwosu (1998) and A.A. Nwosu (1995) found that.....
- (b) or when 2 authors with the same surname appear with others, e.g A. A. Nwosu and Okeke (1995) and A.D. Nwosu and Okafor (1993) studied .....

***Two or More Works within the same Parenthesis***

- (a) Two or more works by different authors cited within the same parentheses: When this is the case, arrange authors' names in alphabetical order with each author's surname and citations separated by semicolons e.g..
- (i) Past research (Agu, 1981; Dike, 1979; Emenike, 1985; Nze, 1990) ....

**Exception:-** You may separate a major citation from other citations within parentheses by inserting a phrase, such as "see also" before the first of the remaining citations which should be alphabetically arranged. Examples: Several studies (Onwu, 1993; see also Agu, 1993; Nze, 1990).

- (b) Two or more works by the same author(s) with different years of publication:

In this case the name(s) are arranged in order by year of publication with 'in press' are cited last. The authors surnames are written once; the dates are provided within the parenthesis. Examples:

- (i) Past studies (Obioma and Ohuche, 1982, 1993 in press).

or

- (ii) Previous findings (Nwosu, 1985, 1992, 1995).
  
- (c) Two or more works by the same author or (or by the same two or more authors in the same order). Arrange such with the same publication date by the suffixes a, b, c and so forth after the year; repeat the year.

Examples:

- (i) Similar findings (Nwafor, 1979a, 1979b, 1979c)....

or

- (ii) Similar findings (Obioma and Okeke, 1971, in press - a, in press - b, in press - c) .....

### *Personal Communication*

These may be letters, memos, some electronic communication (e.g. E-mail, discussion groups, messages from electronic

bulletin boards), telephone conversations, etc. Such personal communication do not provide recoverable data, hence are not included in the reference list. However, they are cited in the text only. In such cases, give the initials as well as the surname of the communicator and provide as exact a date as possible. e.g.

(i) B. O. Agu (Personal Communication, May 9, 2000)

or

(ii) (B. O. Agu, Personal Communication, May 9, 2000).

### *Citation in Parenthetical Material*

In a citation that appears in parenthetical text, use commas and not brackets to set off the date

Examples:

(See Table 2 of Agu, 1996, for complete illustration).

or

(See Agu & Nwosu, 1996, for complete data).

### *The Use of "and" and an "ampersand" (&)*

(a) The word 'and' is used to join the names of multiple authors in running text, Examples

(i) As has been discussed by Okeke, Nzewi, Onyegebu, and Okwor (1995)...

- (b) The Ampersand (&) is used to join the names in parenthetical material, example

(See Agu & Nwosu, 1996, for complete data).

### *Quotations in Texts*

- (a) For verbatim quotations taken from referenced source the researcher encloses the quotations in double inverted commas with the author's name and date of publication as well as the page from where the quotation is lifted, given or shown, in parentheses. Examples

(i) According to Okpala (1995:26) "Geography students perform better academically when ...."

or

(ii) "Geography students perform better academically when ..... "(Okpala 1995:26)

or

(iii) Okpala (1995:26) stated that "Geography students perform better academically when ....."

In these examples 26 is the page of the referenced material from where the researcher got the quotation.

- (b) Where the quotation is up to forty (40) words or more, it is indented, starting on a new line and centering the quotation between the two margins of the paper. Here the quotations are not enclosed in quotation marks, but rather typed with single spacing.

For example:

According to Borg (1981:129),

Most scientific research can be placed in one of three broad categories. The first, descriptive research, is aimed at describing the characteristics of subjects of the science. The second, correlational, explores relationships between variables and measures the effect of these manipulations on another set of variables.

In verbatim quotations, the exact sentence(s) must be copied out the way they appear in the referenced material without alteration.

### *Compiling the Reference*

References contain information necessary for identifying and locating all the recoverable sources of information the researcher used during the process of carrying out a study. This is normally



shown at the end of the write-up. For details, see chapter three of this book.

## *Summary*

The review of literature is a systematic process of locating and studying all existing work that is relevant to the area of research under study. After studying these relevant documents, a report is written, which helps to pull together the relevant information from all the studies reviewed. This will give the readers an overall picture of the state of knowledge about the problem being tackled.

Review of educational literature helps the students or researcher identify and read the much useful pieces of information generated by educational research that are relevant to the researcher's problem area. By so doing the researcher gets to know the extent, quality and direction of work done in the area, as well as acquire much knowledge about the issue under investigation.

In reviewing the literature, the researcher identifies and uses sources of relevant information. These include Primary, Secondary and Preliminary sources, while primary sources (e.g. Journals, Reports, Dissertations etc.) are those publications in which persons who carry out research report their findings, the secondary sources (e.g. Textbooks, Reference Books) are publications in which

the author is reporting on research that someone else carried out. Thus primary sources are more original and authentic pieces of information than secondary sources. However, secondary sources give the reader a quick and readable overview of the works related to the problem under investigation. Preliminary sources on the other hand, are sources used to locate documents, articles and books related to the problem under investigation. Examples include catalogues, indexes, abstracts etc. Preliminary sources can be searched manually or done by computer. While searching preliminary sources for identification of relevant primary and secondary sources one writes down the bibliographic data for these sources in index or bibliography cards which should be

- (i) appropriately coded according to degree of relevance and importance and
- (ii) organized.

When one locates the needed sources (after the preliminary search), one settles to read and write up the report.

In conducting a review of literature these are therefore the steps to take.

- (1) Define ones problem;
- (2) Review secondary sources to help redefine problem;
- (3) Translate problem statements into key words;

- (4) Search the Preliminary sources;
- (5) Read primary and secondary sources and make notes on cards; Documents read should also be critically reviewed.
- (6) Organize the notes;
- (7) Write up the report. Here emphasis has to be given to more relevant documents reviewed and the report has to be clearly written.

In carrying out the research study, the researcher consults so many reference materials. The researcher should cite these sources, thereby acknowledging the origin or source of idea. Citations are not haphazardly done. There are standard and approved formats. However the A.P.A. format is the one most preferred and used especially in Educational Research.

### **Review Questions**

1. Explain the term "Review of Literature"  
Why is it necessary for any educational research?
2. Critically review the types of sources of information in Research Literature giving at least two examples of each.

- (4) Search the Preliminary sources;
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### **Review Questions**

1. Explain the term "Review of Literature"  
Why is it necessary for any educational research?
2. Critically review the types of sources of information in Research Literature giving at least two examples of each.

3. Explain how each of these sources of information (named in 2 above) can be located in your library.
4. Discuss the steps taken in conducting a review of literature.
5. Discuss the strategies you will recommend for reading and making notes while reviewing relevant sources of information. Highlights of what you can do to enhance the accuracy and usefulness of the information you will take down should be given.
6. Explain how you will organize data and write up the Literature Review Report.
7. Write out at least 5 citation formats used for any 5 named types of work according to the A.P.A. format.