

**MOHAMED KHEIDER**  
University of Biskra

# Master 1 Research Methodology Syllabus

Full lectures included



**MOHAMED KHEIDER**  
University of Biskra

**Faculty of Letters and Foreign Languages**  
**Department of Foreign Languages**  
**Section of English, Master One Syllabus**  
**Academic Year 2016/2017**

### Instructor

Instructor: Dr. Ahmed Chaouki, HOADJLI.  
Rank: Lecturer.  
Office: Room 21: Faculty of Letters and Foreign Languages.  
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### Lecture Class (credit hours 1:30 hrs.)

Course Title: Research Methodology  
Level: Master One  
Time: Tues, 8:00-9:30 a.m. (90 mins)  
Location: Amphitheatre F

### Tutorial Class (TD) (credit hours 4:30 hrs.)

Tues.: 09:40 - 11:10 a.m. G3  
Thurs.: 11:20 - 12:50 p.m. G1  
13:10 - 14:50 p.m. G2  
Location: BC 9 – BC 11

### Course Description

This course introduces and discusses approaches, strategies, and data collection methods relating to research in social sciences. Students will consider how to select the appropriate methodology for use in a study to be performed. Additionally, these students will learn how to collect data based on different data collection methods, construct these tools, and pilot them before they become ready for use. Finally, this course elucidates the requirements for an academic work, considering aspects related to language, writing style, and lay-out. To culminate this final stage, students will learn to write a comprehensive research proposal that may be conducted in the future.

## General Course Objectives

This course aims to guide Master One students at the Section of English in the university of Biskra towards achieving competence and proficiency in the theory of and practice to research. This fundamental objective can be realised through helping these students to develop the subject of their research, encourage the formation of higher level of trained intellectual ability, critical analysis, rigour, and independence of thought, foster individual judgement, and skill in the application of research theory and methods, and develop skills required in writing research proposals, reports, and dissertation; and

### In more specific practical aims, the present course aims to:

- enable Master One students understand what research is and what is not.
- raise awareness of crucial aspect of the nature of Knowledge and the value of scientific method.
- introduce the concept at the heart of every research project –the research problem- and to discuss what a researchable problem is.
- evaluate literature, form a variety of sources, pertinent to the research objectives.
- identify and justify the basic components of the research framework, relevant to the tackled research problem.
- explain and justify how researchers will collect research data.
- discuss how to cite sources, using the American Psychological Association (APA), and justify this choice.
- consider the kind of language to use in an academic written work.
- put forward a credible research proposal, and
- finally, warn the common mistakes in the field of research methodology.

## Course Structure

The structure of the course is based on two approaches. The first is a cumulative approach which introduces, step-by-step, the contents of the academic subject of research theory and practice. the second is concerned with the involvement of Master One students in the practical work in order to develop the skills needed to produce a good quality of final product.

There are eight themes in this course, which are designed to be taught consecutively. Each theme contains sections that discuss the relevant core idea of the subject studied. These sections are regularly interpreted with exercises for the students to consolidate and assess their understanding of the subjects presented.

## Course Contents

### **THEME 1: *Research Methodology:***

#### ***A review of the Fundamentals***

1. Meaning of Research
2. Definitions of Research
3. Objectives of Research
4. Motivation in Research
5. General Characteristics of Research
6. Criteria of Good Research
7. Types of Research

### **THEME 2: *The Research Problem***

1. Scientific Thinking
2. What is a Research Problem
3. Selecting the Problem
4. Sources of the Problem
5. Defining a Problem
6. Statement of a Problem
7. Delimiting a Problem
8. Evaluation of a Problem

### **THEME 3: *The Review of Literature***

1. Meaning of Review of Literature
2. Need of Review of Literature
3. Objectives of Review of Literature
4. Sources of Literature
5. The Functions of Literature
6. How to Conduct the Review of Literature
7. Some Hints for the Review of Literature
8. Precautions in Library Use
9. Reporting the Review of Literature

### **THEME 4: *The Research Hypotheses***

1. Meaning of Hypothesis
2. Definitions of Hypothesis
3. Nature of Hypothesis
4. Functions of Hypothesis
5. Importance of Hypothesis
6. Kinds of Hypothesis

7. Characteristics of a Good Hypothesis
8. Variables in a Hypothesis
9. Formulating a Hypothesis
10. Testing the Hypothesis

### **THEME 5: *The Research Approach***

1. The Philosophical Background
2. The Qualitative Approach
3. The Quantitative Approach
4. The Mixed-Methods Approach
5. Criteria for Selecting a Research Approach

### **THEME 6: *The Research Strategies***

1. What are the Research Strategies?
2. Which Strategy to Choose?
3. Case Studies
4. Experiments
5. Ethnography
6. Phenomenology
7. Ground Theory (GT)
8. Action Research
9. Mixed-methods
10. Longitudinal

### **THEME 7: *Data Collection Methods***

1. Questionnaires
2. Interviews
3. Focus Groups
4. Observation

### **THEME 8: *Sampling***

1. Meaning and Definition of Sampling
2. Functions of Population and Sampling
3. Methods of Sampling
4. Characteristics of a Good Sample
5. Size of a Sample
6. The Sample Cycle

## Recommended references:

1. Cohen, L. Lawrence, M., & Morrison, K. (2005). *Research Methods in Education (5th edition)*. Oxford: Oxford University Press.
2. Denscombes, M. (2010). *The Good Research Guide: For small-scale social research projects*. Maiden-Read: Open University Press.
3. Dornyei, Z. (2007). *Research Methods in Applied Linguistics*. Oxford: Oxford University Press.
4. Hoadjli, A.C. (2015). *The Washback Effect of an Alternative Testing Model on Teaching and Learning: An exploratory study on EFL secondary classes in Biskra*. Unpublished Doctoral Thesis, University of Mohamed Kheider, Biskra.
5. Kothari, C. R. (1980). *Research Methodology: Research and techniques*, New Delhi: New Age International Publishers.
6. Kumar, R. (2011). *Research Methodology: a step-by-step guide for beginners (3<sup>rd</sup> edition)*. London, UK: TJ International Ltd, Padstow, Cornwall.
7. Leedy, P. D. (1980). *Practical Research: Planning and design*. Washington: Mc Millan Publishing Co., Inc.
8. Singh, Y. K. (2006). *Fundamental of Research Methodology and Statistics*. New Delhi. New International (P) Limited, Publishers.
9. Wallinman, N. (2006). *Your Research Project: A step-by-step guide for the first-time researcher*. London: Sage Publications.
10. <http://www.pitt.edu/~super7/43011-44001/43911.ppt>

**Lecturer's Note:** *The following section contains this course's lectures. The lectures are included in themes. Each theme is divided into two lectures. At the end of this paper, you find a list of references used in this syllabus. The lectures are organised as follows:*

1. Objectives
2. Content
3. The Lectures

**Lecturer:** HOADJLI, Ahmed Chaouki

*Lecture One:*

*Theme 1, Sections: 1 to 4*

**I. Objectives**

*At the end of the theme, you should be able to:*

- explain what research is and what it is not, and the different definitions of research;
- introduce the objectives of research, and set the motivation in research;
- present some aspects of the debate about the nature of knowledge and the value of scientific method; and
- discuss the criteria of good research and the different types of research.

**II. Content**

1. Meaning of Research
2. Definitions of Research
3. Objectives of Research
4. General Characteristics of Research

**1. Meaning of Research**

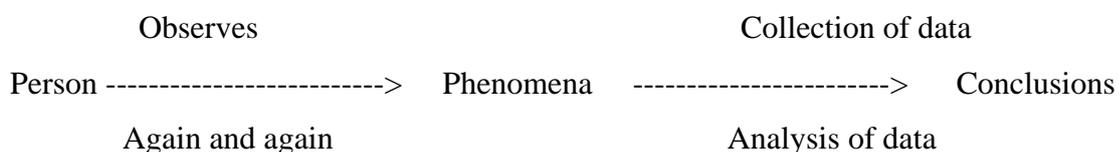
Research seeks the answer of certain questions which have not been answered so far, and the answers depend upon human efforts. In common parlance, it refers to a search for knowledge. The Advanced Learners' Dictionary of current English lays down the meaning of research as a careful investigation or inquiry specially through search for new facts in any branch of knowledge. In this sense, it is a voyage of discovery. We all possess the vital instinct of inquisitiveness for, when the unknown confronts us, we wonder our inquisitiveness makes us probe and attain full and fuller understanding of the unknown. This inquisitiveness is the mother of all knowledge and the method that we employ to obtain the knowledge that can be termed research (Kothari, 1990).

**2. Definition of Research**

The term 'research' consists of two words:

*Research: Re+ search*

'Re' means again and again and 'search' means to find out something. The following is the process:



Therefore, research means to observe the phenomena again and again from different dimensions. It is a process of which a person observes the phenomena again and again and collects data on the basis of data s/he draws some conclusions.

Research is oriented towards the discovery of relationship that exists among phenomena of the world in which we live. The fundamental assumption is that invariant relationship exists between antecedents and certain consequents so that under a specific set of conditions a certain consequences can be expected to follow the introduction of a given antecedent:

- **According to Rusk**

"Research is a point of a view, an attitude of inquiry or a frame of mind. It asks questions which have hitherto not been asked, and it seeks to answer them by following a fairly definite procedure. It is not a mere theorizing, but rather an attempt to elicit facts and to face them once they have been assembled. Research is likewise not an attempt to bolster up pre-conceived opinions, and implies a readiness to accept the conclusions to which an inquiry leads, no matter how unwelcome they may prove. When successful, research adds to the scientific knowledge of the subject".

- **According to George J. Mouly**

"Research is the systematic and scholarly application of the scientific method interpreted in its broadest sense, to the solution of social [...] problems; conversely, any systematic study designed to promote the development of social studies as a science can be considered research".

- **According to Francis G. Cornell**

"To be sure the best research is that which is reliable, verifiable, and exhaustive, so that it provides information in which we have confidence. The main point here is that research is, literally speaking, a kind of human behaviour, an activity in which people engage".

- **According to C. Woody**

"Research is a carefully inquiry or examination in seeking facts or principles; a diligent investigation to ascertain something; and this definition makes clear the fact that research is not merely a search for

truth, but a prolonged, intensive, purposeful search. It constitutes a method for the discovery of truth which is really a method of critical thinking; it is comprising defining and redefining problems; formulating hypotheses or suggested solutions; collecting, organizing and evaluating data; making decisions and reaching conclusions to determine whether they fit the formulating hypotheses”.

- **According to C.C. Crawford**

“Research is simply a systematic and refined technique of thinking, employing specialized tools, instruments, and procedures in order to obtain a more adequate solution of a problem than would be possible under ordinary means. It starts with a problem, collects data or facts, analyses these critically and reaches decisions based on the actual evidence. It evolves original work instead of mere exercise of personal. It evolves from a genuine desire to know rather than a desire to prove something. It is quantitative, seeking to know not only what but how much, and measurement is therefore, a central feature for it”.

- **According to P.M. Cook**

"Research is an honest, exhaustive, intelligent searching for fact and their meanings or implications with reference to a given problem. The product of findings of a given piece of research should be an authentic, verifiable, and contribution to knowledge in the field studied”.

He has emphasised the following characteristics of research in his description:

- It is an honest and exhaustive process.
- The facts are studied with understanding.
- The facts are discovered in the light of a problem. Research is problem- centred.
- The findings are valid and verifiable.
- Research work should contribute new knowledge in that field (Cited in Singh, 2006).

- **According to P.D. Leedy**

“Research is the manner in which we solve knotty problems in an attempt to push back the frontiers of human ignorance. Research is ultimately a

way of thinking. It is a way of looking at accumulated fact so that a collection of data speaks to the mind of the researcher”.

She has insisted on that research has many discrete characteristics. These characteristics comprise the particular approach to a probing for truth. These latter include the following:

- Research begins with a question in the mind of the researcher.
- Research demands the identification of a problem, stated in clear, unambiguous terms.
- Research requires a plan.
- Research deals with the main problem through appropriate sub-problems.
- Research seeks direction through appropriate hypotheses and is based upon obvious assumption.
- Research deals with facts.
- Research is circular (Cited in Leeds, 1980).

### 3. Objectives of research

The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of research is to find out the truth which is hidden and which has not been discovered yet. Kothari (1990) sees that each research study has its own specific purposes. These objectives often fall under a number of broad groupings. Some examples of these are as follows:

- To gain familiarity with a phenomenon or to achieve new insights into it. Studies with this object in view are termed as exploratory or formulative research studies.
- To portray accurately the characteristics of a particular individual, situation or a group. Studies with this object in view are known as descriptive research studies.
- To determine the frequency with which something occurs or with which it is associated with something else. Studies with this object in view are known as diagnostic research studies.
- To test a hypothesis of a causal relationship between variables. Studies with this object are known as hypothesis-testing research studies.

On the same issue, Singh (2006) provides a different classification of objectives. For him, there are three fundamental objectives of research. These are:

- **Theoretical Objectives**

Those researches whose objectives are theoretical aim to formulate new theories, principles, or laws. Such type of research is exploratory because it explains the relationships

of certain variables. The researches contribute some basic knowledge to the human knowledge.

- **Factual Objectives**

These researches whose objectives are factual aim to find out new facts. This objective by nature is descriptive. These researches describe facts or events which happened previously. Such type of research is done in history.

- **Application objectives**

The research having application objectives does not contribute a new knowledge in the field of human knowledge but suggests new applications. By application, we mean improvement and modification.

#### **4. Motivation in research**

What makes people to undertake research is a question of fundamental importance. The possible motives for doing research may be either one or more of the following:

- Desire to get a research degree with its consequential benefits;
- Desire to face challenge in solving unsolved problems;
- Desire to get intellectual joy of doing more creative work;
- Desire to be of service to society; and
- Desire to get respectability (Kothari, 1990).

However, this is not an exhaustive list of factors motivating people to undertake research studies. Many more factors, such as: directives of government, employment conditions; curiosity about new things; desire to understand causal relationships, social thinking and awakening, and the like may as well motivate people to perform research operation (ibid).

**Lecture Two:***Theme 1, Sections: 5 to 8***I. Content**

5. Criteria of good Research
6. Types of Research
7. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
8. Let's Practice!
  - a. Written Feedback
  - b. Assessment

**5. General Characteristics of Research**

The following characteristics may be gathered from the definitions of “research”:

- It gathers new knowledge or data from primary or first-hand sources.
- It places emphasis upon the discovery of general principles.
- It is an extent systematic and accurate investigation.
- It uses certain valid data gathering devices.
- It is logical and exact.
- The researcher eliminates personal feelings and preferences.
- Research is patient and unhurried activity
- Research is carefully recorded and reported.
- Conclusions and generalisations are arrived at carefully and cautiously (Singh,2006).

**6. Criteria of a Good Research**

Whatever may be research is, one can state the qualities of good research should be as under:

- *Good research is systematic:* It means that research is structured with specified steps to be taken in specified sequence in accordance with the well-defined set of rules. Systematic characteristic of the research does not rule out creative thinking but certainly does reject the use of guessing and intuition in arriving at conclusions.

- *Good research is logical:* This implies that research is guided by the rules of logical reasoning and the logical process of induction and deduction are of great value in carrying out research. Introduction is the process of reasoning from a part to the whole; whereas, deduction is the process of reasoning from some premise. In fact, logical reasoning makes research more meaningful in the context of decision making.
- *Good research is replicable:* This characteristic allows research results to be verified by replicating the study and thereby building a sound basis for decisions (Kothari, 1990).

## 7. Types of Research

The basic types of research are:

### 1. *Description Vs. Analytical*

The major aim of descriptive research is description of the state of affairs as it exists at present. In analytical research, on the other hand, researcher has to use facts or information already available, and analyse these to make a critical evaluation of the materials.

### 2. *Applied Vs. Fundamental*

Research can either be applied or (action) research or fundamental (basic or pure) research. Applied research aims at finding a solution for an immediate problem facing a society or an organisation; whereas, fundamental research is mainly concerned with generalisations and with the formulation of the theory

### 3. *Conceptual Vs. Empirical*

Conceptual research is that related to some abstract idea(s) or theory. It is generally used by philosophers and thinkers to develop new concepts or reinterpret new ideas. On the other hand, empirical research relies on experience or observation alone, often without due regard for system or theory.

### 4. *Other types of research*

All other types of research are variations of one or more of the above examples. Generally, these types of research are based on either the purpose of research, or the time required to accomplish research, or the environment in which research is done, or on the basis of some similar factor.

From the point of time, we can think of research as one-time research or longitudinal research. Depending on the environment, research can be field-self research or laboratory research. The research may be exploratory or it may be formalised. The objectives of exploratory research is the development of hypotheses rather than testing these hypotheses; whereas, formulised research studies are those with substantial structure and with specific hypotheses to be tested.

Historical research is that which utilises historical sources likes documents. It is concerned with the study of ideas, or events of the past. Research can also be classified as conclusions-oriented and decision-oriented. A research in doing conclusion oriented research is free to pick-up a problem, re-design the enquiry as s/he proceeds, and is prepared to conceptualise as s/he wishes. On the other hand, decision-oriented research is always for the need of decision maker and the researcher. In this case, the researcher is not free to embark upon research according to his/her inclination.

### *Lecture Three:*

*Theme 2, Sections: 1 to 5*

#### **I. Objectives**

*At the end of the theme, you should be able to:*

- introduce the concept at the heart of any research project- the research problem;
- describe how a research problem is selected; and
- discuss how a research problem is delimited, and evaluated.

#### **II. Content**

1. Scientific Thinking
2. What is a Research Problem?
3. Selecting a Research Problem
4. Sources of the Problem
5. Defining a Problem

##### **1. Scientific Thinking**

In social sciences, a research work is often oriented towards the solution of a problem or to seek an answer of a question. The first step of this process is to identify a problem. To do this, a researcher is required to use scientific thinking. But, what is scientific thinking?

Scientific thinking is usually defined as an inductive-deductive mode of thinking or reasoning. In this sense, induction is to move from particular to general; whereas, deduction is backward. It is to move from general to particular. Ultimately, in such a mode, a researcher is expected to explain the uniformities of nature by appealing to experiences.

The scientific thinking starts with facts and continually returns to facts to test and verify its hypotheses. It often aims to establish the relationships between the variables through evidences. The sources of these evidences are based on some methods. Examples of these methods are customs and traditions, authority, personal experiences, self-evident, proposition, and scientific inquiry (Singh, 2006).

## 2. What is a Research Problem?

A research problem, in general, refers to some difficulty which a researcher experiences in the context of either a theoretical or practical situation and wants to obtain a solution for the same. Thus, a research problem is one which requires a researcher to find out the best solution by which cause of action the objective can be attained optimally in the context of a given environment. This stage requires an enquiring mind, an imagination, and an eye for inconsistencies and inadequacies in current measure. It is often useful in identifying a specific problem (Kothari 1990; Walliman, 2001).

In particular, some components that make-up a research problem can be examples like the ones that we state below:

- There must be an individual or a group which has some difficulty or the problem.
- There must be some objective (s) to be attained at. If one wants nothing, one cannot have a problem.
- There must be alternative means for obtaining the objective (s) one wishes to attain. This means that there must be at least two means available to a researcher for s/he has no choice of means, s/he cannot have a problem.
- There must remain some doubt in the mind of a researcher with a regard to the solution of alternatives. This means that research must answer the questions concerning the relative efficiency of the possible alternatives.
- There must be some environment (s) to which the difficulty pertains (Kothari, 1990).

Thus, this initial stage in research requires an awareness of current issues in the subject and inquisitiveness and questioning mind. On this point, Walliman (2001) suggests a list of features that one should follow and look for it in order to obtain a research problem. This list concerns the following ideas:

- The research problem should be a great interest to you.

- The research problem should be significant.
- The research problem should be delineated.
- The researcher should be able to obtain the information required.
- The researcher should be able to draw conclusions related to the problem.
  - The researcher should be able to state the problem clearly and concisely (p. 22).

### 3. Selecting a Research Problem

The research problem undertaken for study must be carefully selected. A problem must spring from the researcher's mind. The factors which need to be considered in the selection of research problem are both external and internal criteria. External criteria have to do with matters, such as novelty, and importance for the field. Internal criteria, on the other side, involve considerations as interest, training, cost, and time.

According to Good and Scates cited in Sing (2006), the criteria for the selection of the problem include matters, such as:

- Novelty and avoidance of unnecessary duplication.
- Interest, intellectual curiosity and drive.
- Training and personal qualifications.
- Importance for the field.
- Special working conditions.
- Approachability of the sample.
- Cost.
- Administrative cooperation.
- Time factor.

Sing (ibid) referred to McShan who has proposed an objective guide for judging the merits of a problem. A set of questions may be raised for this purpose. These are:

- Is the problem really important?
- Is the problem interesting to others?
- Is the chosen problem a real problem?
- Am I able to state hypotheses from the problem?
- Do I understand something new from this problem?
- Will I be able to select a sample from which I can target the population?

- Will my proposed data-gathering instruments actually give the information which I want?
- Is the study, including the application of its results, practical?

#### 4. Sources of the Problem

To select a research problem, a researcher can consider some sources. Examples of these are:

- Personal experience of the researcher in the field.
- Literature review on a research topic.
- New innovations, changes, and developments in a given research area.
- Research contacts with experts in a given research area.

#### 5. Defining a Problem

According to a number of research methodologies, a problem clearly stated is a problem half-solved. This means that there is a need for defining a research problem as an initial step in a research process. Besides, it is usually recommended by research methodologists that the investigated problem must be defined unambiguously to discriminate the relevant data from irrelevant data. A proper definition of a research problem will enable the researcher to be on the right track; whereas, an ill-defined problem may create hurdles (Kothari, 1990).

For Singh (2006), to define a problem means 'to pinpoint the problem or defining a problem to reach the core of a problem i.e., threads are analysis'.

*(a) Need of defining a problem:*

The definition of a problem serves the following purposes:

- The definition of a problem sets the direction of the study.
- The definition reveals the methodology or procedure of the study.
- The definition helps the researcher to control subjectivity.
- The definition of the problem suggests and specifies the variables to be taken up into the investigation through a problem involved in so many variables.
- The definition makes the research work practical.

*(b) Precautions are to be taken in identifying the problem:*

The following precautions should be taken into consideration for identifying a problem.

- The words used for defining a problem should have a single meaning.
- The statement of the problem must be brief but comprehensive.
- The assumptions are to be recognised for the study.

- The problem should have practical importance in the field.
- The definition or statement of the problem should have certain rationale.

(c) *The following steps are to be followed in defining a problem:*

- The researcher should have to develop a conceptual framework of the problem.
- Delimiting the elements of the problem.
- Classifying the elements in the homogeneous group.
- Locating the key-concepts in the conceptual framework.
- Evaluating the theoretical security of the problem.
- The final form of the statement can be given into verbal form to a conceptual framework of the problem.
- Deciding the practical difficulty in conducting the study (p.27).

## **Lecture Four:**

*Theme 2, Sections: 6 to 10*

### **I. Content:**

6. Statement of Problem
7. Delimiting a Problem
8. Evaluating a Problem
9. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
10. Let's Practice!
  - a. Written Feedback
  - b. Assessment

### **6. Statement of the Problem**

After selecting a problem, it should be stated carefully, Kerling (cited in Singh, *ibid*) has identified three criteria of a good problem statement. These mainly concern:

- A problem should be concerned with relation between two or more variables.
- It should be stated 'clearly and unambiguously in right form'.
- It should be amenable to testing (p.29).

## 7. Delimiting a Problem

Delimiting a problem is very important. A study should be delimited by the following aspects:

- A study should be delimited to certain variables that should be mentioned clearly in the problem.
- The study should be delimited to the area or level as primary, secondary, or university level.
- The study should be delimited to a size of sample considering time, energy, money; but, it should be representative.
- The study should be delimited to the research approach, [strategies], and tools.

## 8. Evaluating of a Problem

Before the research problem can be considered appropriate, several searching questions should be raised. It is only when these questions are answered in the affirmative, one can say that the problem can be effectively solved through the process of research. Such questions are those ones stated in below:

- Is the problem significant? Would the solution make any difference as far this study is concerned?
- Is the answer to the main question already available?
- Is the problem feasible? This simply means will the researcher be able to carry out the research? and will s/he be able to reach successful conclusions?
- Is the researcher skilful enough to collect and analyse data?
- Are pertinent data accessible?
- Does the researcher have enough time to carry out the research?

Does the researcher have courage and determination to overcome the difficulties s/he will encounter in his/her research? (ibid).

**Lecture Five:***Theme 3, Sections: 1 to 5***I. Objectives****At the end of the theme, you should be able to:**

- explain what the review of literature is;
- identify and describe the objectives and sources of the review of literature;
- discuss what the functions of the review of literature are;
- explain how to conduct the review of literature and present what precautions a researcher should take into consideration in library use; and
- describe how the review of literature should be reported.

**II. Content**

1. Meaning of Literature Review
2. Need of Review of Literature
3. Objectives of Review of Literature
4. Sources of Review of Literature
5. The Functions of Review of Literature

**1. Meaning of Literature Review**

The phrase 'review of literature' consists of two words '*review*' and '*literature*'. From the traditional meaning, the word literature is used with reference to the language, e.g. Hindi Literature, English Literature, Sanskrit Literature. It includes a subject content: prose, poetry, dramas, novels, stories, etc. In research methodology, the term literature refers to the knowledge of a particular area of investigation of any discipline which includes theoretical, practical, and its research studies.

The term '*review*' means to organise the knowledge of the specific area of research to evolve an edifice of knowledge to show that this study would be an addition to this field. The task of review of literature is highly creative and tedious because the research has to synthesise the available knowledge of the field in a unique way to provide the rationale for his/her study (Singh, 2006, p. 35).

The term 'Review of Literature' has been defined in the following ways:

- **According to Good, Barr and Scates**

“The competent physician must keep abreast of the latest discoveries in the field of medicine. Obviously, the careful student of education, the research worker and investigator should be familiar with location and use of sources of educational information”.

- **According to W. R. Borg**

“The literature in any field forms the foundation upon which all future work will be built. If we fail to build the foundation of knowledge provided by the review of literature, our work is likely to be shallow and naive and will often duplicate work that has already been done better by someone else”.

- **According to C. V. Good**

“The keys to the vast storehouse of published literature may open doors to sources of significant problems and explanatory hypotheses and provide helpful orientation for definition of the problem, background for selection of procedures, and comparative data for interpretation of results. In order to be creative and original, one must read extensively and critically as a stimulus to thinking”.

- **According to J. W. Best**

“Practically all human knowledge can be found in books and libraries. Unlike other animals that must start a new with each generation, man builds upon the accumulated and recorded knowledge of the past. His constant adding to the vast store of knowledge makes possible progress in all areas of human endeavour”.

Reviewing the literature has two phases. The first phase includes identifying all the relevant published material in the problem area and reading that part of it with which we are not thoroughly familiar. The second phase of the review of literature involves writing this foundation of ideas into a section of the research report. For the researcher, it establishes the background in the field. For the readers, it provides a summary of thinking and research necessary for them to understand the study (ibid).

## 2. Need of Review of Literature

The review of literature is essential due to the following:

- One of the early steps in planning a research work is to review a research done previously in the particular area of interest.
- It is very essential for every researcher to be up-to-date in his/her information about the literature related to his/her own problem already done by others.
- It avoids the replication of the study of findings to take an advantage from similar or related literature.
- It provides as source of problem of study.

## 3. Objectives of Review of Literature

The review of literature serves the following purposes in conducting research work:

- It provides theories, ideas, explanations or hypotheses which may prove useful in the formulation of a new problem.
- It avoids replication when it indicates whether the evidence already available solves the problem adequately without requiring further investigation.
- It provides the sources for hypothesis. The researcher can formulate research hypothesis on the basis of available studies.
- It suggests method, procedure, sources of data appropriate to the solution of the problem.
- The conclusions drawn in the related studies may be significantly compared and maybe used as the subject for the findings of the study.
- Literature in one's area of activity is good avenue towards making oneself.

## 4. Sources of Literature

There are various sources of literature which may be used for this purpose. Examples of these are:

- Books and textbooks material;
- Periodicals;
- Abstracts;

- Encyclopaedias;
- Handbooks and Guides;
- Special Dictionaries;
- Dissertations and Theses; and
- The Internet.

## 5. The Functions of Literature

There are four functions of review of literature:

1. The conceptual frame of reference for the contemplated research.
2. An understanding of the status of research in problem area.
3. Clues to the research approach, method, instrumentation, and data analysis.
4. Probability of success and significance of findings.

### *Lecture Six:*

*Theme 3, Sections: 6 to 11*

#### **I. Content:**

6. How to Conduct the Review of Literature?
7. Some Hints for the Review of Literature
8. Precautions in Library Use
9. Reporting the Review of Literature
10. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
11. Let's Practice!
  - a. Written Feedback
  - b. Assessment

## 6. How to Conduct the Review of Literature

To conduct the review of literature, the researcher should go through these stages:

**Stage 1:** Try to gain some impression of what the source is about; what a question or questions the author is trying to answer; how the source is structured, and whether, in fact, the questions tackled and the answers put forward are relevant to your needs.

**Stage 2:** If you decide that the source is relevant to your research subject, then you must formulate the question or questions you anticipate will be answered in the source. This enables you to locate the required information and will save you time and effort as you cannot afford to go reading aimlessly through the source. At this stage, you must adopt an active and analytical attitude.

**Stage 3:** After formulating the main question or questions that you anticipate the source will answer, you must review the source to look for answer for your questions. This involves locating the parts of the source where your questions are dealt with. You must then look for the answers or conclusions that the author has drawn, and also at how the author arrived at them.

**Stage 4:** Supposing that you have extracted the relevant information from the written report, you must now record your data in note form, so that later you can retrieve it and use it easily at the appropriate stage (Walliman, 2001).

## 7. Some Hints for the Review of Literature

Some miscellaneous hints are provided here on how to review the literature. These concern mainly:

- To realise that reviewing the literature is essentially the library phase of the project, and so we must become thoroughly conversant not only with the way in which libraries in general function, classify, and catalogue, but also with the way in which the specific library in which we work does these things.
- To recognise that there are only two criteria for good bibliographic research; accuracy and consistency. Therefore, from the very beginning of the review of literature, it is sound practice to begin recording the essential information accurately and exactly in the same way.
- To copy direct quotations and note the page number of the book or journal on which it appears because this will be needed in referring to the quotation.

## 8. Precautions in Library Use

The following precautions are to be taken in the use of library for review of literature:

- Avoid intellectual dishonesty.
- Guard against being conditioned by the view point of an earlier researcher and the temptation of blindly following his/her procedure.
- Merely listing of previous studies without reviewing them or giving their characteristics is not enough.

- It is always helpful to arrange the previous studies in chronological order so that the growth of the field is clearly known to the researcher as well as to the readers.
- A researcher should have a good grasp of library procedures which will help him/her to locate books and references needed by him/her without wasting most of time and energy. This process can be classified into two categories:
  - (a) *Preliminary Reading*: For the bird's eye view of the whole thing.
  - (b) *Critical Thinking*: The references and material which seem useful as a result of preliminary reading are noted down and are read critically and serious evaluation of the available data and information.

## 9. Reporting Review of Literature

Generally, the review of literature is reported in the second chapter of the dissertation. The following procedure should be followed in reporting it:

- the research should go through collected research studies of the field;
- the researcher should try to relate the collected research studies with his/her own study; and
- at the end, the researcher should show that his/her study is a derivation from the other studies.

The reporting review of literature makes the research study very specific and up-to-date. It is an essential part in writing a dissertation.

*Lecture Seven:*  
*Theme 4, Sections: 1 to 6*

### I. Objectives

**At the end of the theme, you should be able to:**

- explain what a hypothesis is;
- identify the nature of hypothesis and describe its functions;
- display why a hypothesis is important in research;
- describe the different kinds of hypothesis and what are good characteristics of hypothesis;
- discuss the variables in hypothesis; and
- show how to formulate and test the hypothesis.

## II. Content

1. Meaning of Hypothesis
2. Definition of Hypothesis
3. Nature of Hypothesis
4. Functions of hypothesis
5. Importance of Hypothesis
6. Kind of Hypothesis

### 1. Meaning of Hypothesis

The word hypothesis consists of two words:

*Hypo+ thesis = hypothesis*

- ‘Hypo’ means tentative or subject to the verification
- ‘Thesis’ means statement about the solution of a problem.

As such, a hypothesis is a tentative statement about the solution of the problem. It offers a solution of the problem that is to be verified.

Another meaning of the word hypothesis which is composed of two words:

- ‘Hypo’ means composition of two or more variables which is to be verified.
- ‘Thesis’ means position of these variables in the specific frame of reference.

This is the operational meaning of the term hypothesis. Hypothesis is the composition of some variables which have some specific position or role of the variables i.e., to be verified. It is a proposition about the factual and conceptual elements. Hypothesis is called a leap into a dark. It is a brilliant guess about the solution of a problem (Singh, 2006, p.54).

### 2. Definitions of Hypothesis

The term hypothesis has been defined in several ways. Some important definitions have been given in the following:

- **According to J. E. Greigton**

“A hypothesis is a tentative supposition or provisional guess which seems to explain the situation under observation”.

- **According to J. W. Best**

“A hypothesis a shrewd guess or reference that is formulated and provisionally adopted to explain observed facts or conditions and to guide in further investigation”.

- **According to B. W. Tuckman**

“A hypothesis is defined as an expectation about events based on generalisation of the assumed relationship between variables”.

- **According to M. Verna**

“A hypothesis is a theory when stated as a testable proposition formally and clearly and subjected to empirical or experimental verification”

- **According to Barr and Scates**

“A hypothesis is a statement temporarily accepted as true in the light of what is, at the time, known about a phenomenon, and it is employed as a basis for action in the search for new truth, when the hypothesis is fully established, it may take the form of facts, principles and theories”.

- **According to G. J. Mouly**

“A hypothesis is an assumption or proposition whose testability is to be tested on the basis of the computability of its implications with empirical evidence with previous knowledge”.

It is important to distinguish between the three terms assumption, postulate, and hypothesis. In brief, the distinction is as follows:

- **Assumption:** It means taking things for granted so that the situation is simplified for logical procedure.
- **Postulate:** It is the working belief of most scientific activity. Postulates are not proven; they are simply accepted as they are and at their face value so that their basic work for the discovery of the other facts of nature can begin”.
- **Hypothesis:** A hypothesis is different from both of these. It is the presumptive statement of a proposition which the researcher seeks to prove (ibid).

### 3. Nature of Hypothesis

The following are the main features of a hypothesis:

- It is conceptual in nature.
- It is a verbal statement in declarative form.
- It indicates the tentative relationship between two or more variables.
- It has a future or forward reference. It relates to the future verification not to the past facts and information.
- It is the pivot of a scientific research. All the research activities are design for its verification.
- The nature of hypothesis can be well understood by differentiating it with other terms like assumption and postulate.

### 4. Functions of Hypothesis

The following are the main functions of hypothesis:

- It is a temporary solution of a problem concerning with some truth which enables a researcher to start his/her research work.
- It may provide possible solutions to the problem.
- Each hypothesis may lead to formulate another hypothesis.
- Each hypothesis provides the researcher with definite statement which may be objectively tested and accepted or rejected and leads for interpreting results and drawing conclusions that is related to the original purpose.

In sum, the functions of a hypothesis may be condensed into the following:

- To delimit the field of research;
- To sensitise the research to have a realistic approach to the problem; and
- To offer the simple means for collecting evidences to the verification

### 5. Importance of Hypothesis

Research methodologists advocate the importance of hypothesis in the following ways:

- Hypotheses are indispensable in research because they build bridge between the problem and evidence that may solve the problem.
- A hypothesis provides the map that guides and expedites the investigation of the phenomena under consideration.
- The hypothesis directs the researcher's efforts into productive channels.
- The hypothesis may suggest what subjects, tools, and instruments are needed.

- A hypothesis provides the framework for drawing conclusions.

These hypotheses stimulate the researcher for further research studies.

1. The hypothesis may suggest what subjects, tools, and instruments are needed.
2. A hypothesis provides the framework for drawing conclusions.
3. These hypotheses stimulate the researcher for further research studies.

## 6. Kinds of Hypothesis

There are four kinds of hypotheses. These are: (1) Question (2) Declaration statement, (3) Directional statement, (4) Null form or Non-directional.

1. Question form Hypotheses: Some writers assert that the hypothesis may be stated as a question. However, there is no consensus on this view.
2. Declarative Statement: A hypothesis may be developed as a declarative which can provide an anticipated relationship between variables or differences between variables.
3. Directional Hypothesis: A hypothesis may be directional which connotes an expected direction in the relationship or difference between variables.
4. Non-directional hypothesis: A hypothesis may be stated in the null form which is an assertion that no difference exists between or among the variables.

### *Lecture Eight:*

*Theme 4, Sections: 7 to 12*

#### I. Content

7. Characteristics of a Good Hypothesis
8. Variables in a Hypothesis
9. Formulating a Hypothesis
10. Testing the Hypothesis
11. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
12. Let's Practice!
  - a. Written Feedback
  - b. Assessment

## 7. Characteristics of a Good Hypothesis

A good hypothesis must possess the following characteristics:

1. A good hypothesis is in agreement with the observed facts.
2. A good hypothesis does not conflict with any law of nature which is known to be true.
3. A good hypothesis is stated in the simplest possible terms.
4. A good hypothesis permits the application of deductive reasoning.
5. A good hypothesis ensures that the methods of verification are under control of the researcher.
6. A good hypothesis guarantees that the available tools and techniques will be effectively used for the purpose of verification.
7. A good hypothesis ensures that the sample is readily approachable.
8. A good hypothesis indicates clearly the role of different variables involved in the study.
9. A good hypothesis maintains a very apparent distinction with what is called theory, law, facts, assumptions, and postulate.

## 8. Variables in a Hypothesis

There are five types of variables. These are: (1) Independent Variables, (2) Dependent Variables, (3) Moderator Variables, (4) Control Variables, (5) Intervening Variables.

1. **The Independent Variable:** It is a stimulus variable. It is an input which operates either within a person or within environment to affect his/her behaviour. It is that factor which is measured, manipulated, or selected by the researcher to determine its relationship to an observed phenomenon.
2. **The Dependent variable:** it is a response variable or output. It is an observed aspect of the behaviour of an organism that has been stimulated. The dependent variable is that factor which is observed and measured to determine the effect of the independent variable. It is the variable that will change as a result of variation in the independent variable. It is considered dependent because its value depends upon the value of the independent variable. It represents the consequence of change in the person or situation studied.
3. **The Moderator Variable:** It is defined as that factor which is measured, manipulated, or selected by the researcher to discover whether it modifies the relationship of independent variable to an observed phenomenon. The sex generally functions as a moderator variable.

4. The Control variable: It is defined as that variable whose effect must be mentalised or cancelled by the researcher. In general, while the effects of the control variables are neutralized, the effects of the moderator variables are studied. Examples of control variables are: sex, intelligence, and socio-economic status.
5. The Intervening Variable: Each independent variable, moderator and control variables can be manipulated by the researcher and each variation can be observed by him/her as it affects the dependent variable. Often these variables are not concrete but hypothetical, the relationship between a hypothetical underlying or intervening variable and dependent variable.

An intervening variable is that factor which affects the observed phenomenon, but cannot be seen and measured or manipulated. Its effects must be inferred from the effects of the independent and moderator variables on the observed phenomena. Examples of intervening variables are: the attitude, learning process, habit, and interest.

### **9. Formulating a Hypothesis**

To formulate a hypothesis, researchers use induction and deduction. Hypothesis construction enables researchers to generalise their findings beyond the specific conditions which they have obtained.

Since a hypothesis is a formulation of anticipated findings, researchers are advised to develop a hypothesis as a means of demonstrating the basis for their study to themselves and their audience. The task of introducing a study and discussing the findings are facilitated by the existence of a hypothesis.

### **10. Testing the Hypothesis**

The evidence of the work of hypothesis lies in its abilities to meet test of its validity. The purpose of testing a hypothesis is to determine the probability that it is supported by fact. Because a hypothesis is a general expectation about the relationship between variables, there is an extremely large number of instances under which it can be tested, and it would be impractical to attempt to gain support in all of these instances.

A hypothesis is never proved. It is merely sustained or rejected. If it fails to meet the test of its validity, it must be modified or rejected. The confirmation of a hypothesis, on the other hand, is always, a tentative and relative, subject to later revision and even rejection as further evidence appears or more adequate hypotheses are introduced.

***Lecture Nine:****Theme 5, Sections: 1 to 3***I. Objectives****At the end of the theme, you should be able to:**

- understand what a research approach is;
- identify the philosophical and ideological underpinnings of the available research approaches;
- shed light on the historical background of each one of the common research approaches;
- explain the main characteristics of these studied research approaches; and
- examine some strengths and weaknesses of the three research approaches.

**II. Content**

1. The Philosophical Background.
2. The Quantitative Approach.
3. The Qualitative Approach.

**1. The Philosophical Background**

Research approaches are plans and procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. This plan involves special decisions. The overall decision involves which approach should be used to study a given topic. Informing this decision should have philosophical assumptions that the researcher brings to the study. These assumptions are a basic set of beliefs that guide action. In other contexts, such assumptions have been called paradigms: epistemology and ontologies, or broadly conceived research methodologies. These basic philosophical assumptions arise based on discipline orientations, students' advisors, students' inclination, and past research experiences. The types of beliefs held by individual researchers based on these factors will often lead to embracing a particular type of approach in this research.

Although there is a great deal of an ongoing debate about these philosophical assumptions or beliefs that researchers bring to inquiry, four examples are available and common on the literature in research methodology. These are stated as follows: Post-positivism, Constructivism, Transformative, and Pragmatism. The major elements of each position are presented in the table below:

<b>Post-positivism</b>	<b>Constructivism</b>
<ul style="list-style-type: none"> <li>• Determination</li> <li>• Deductionism</li> <li>• Empirical Observation and Measurement</li> <li>• Theory Verification</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding</li> <li>• Multiple Participant Meanings</li> <li>• Social and Historical Construction</li> <li>• Theory Generation</li> </ul>
<b>Transformative</b>	<b>Pragmatism</b>
<ul style="list-style-type: none"> <li>• Political</li> <li>• Power and Justice- oriented</li> <li>• Collaborative</li> <li>• Change-oriented</li> </ul>	<ul style="list-style-type: none"> <li>Consequences of Actions</li> <li>Problem-centred</li> <li>Pluralistic</li> <li>Real-world Practice- oriented</li> </ul>

**(a) Post-positivism Paradigm**

The post-positivist assumptions have represented the traditional form of research, and these assumptions hold true more for qualitative research than quantitative research. This world-view is sometimes called the ‘scientific method’, or ‘doing-scientific research’.

Post-positivists hold a deterministic philosophy in which causes (probably) determine effects of outcomes. Thus, the problems studied by post-positivists reflect the need to identify and assess the causes that influence outcomes such as found in experiments.

**(b) The constructivist Paradigm**

The constructivist assumptions believe that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings of their experiences. These meanings are varied and multiple, leading the researcher to look for complexity of views rather than narrowing meaning into a few categories or ideas. The role of the research is to rely as much as possible on the participants’ views of the situation being studied.

**(c) The Transformative Paradigm**

The transformative assumptions hold that research inquiry needs to be interfered with politics and political change agenda to confront social oppression at whatever level it occurs. Thus, the research contains an action agenda for reform that may change lives of participants, the institutions in which individuals work or live, and the researcher’s life.

### **(d) The Pragmatic Paradigm**

The pragmatic assumptions arise out of actions, situations, and consequences rather than antecedent conditions (as in post-positivism). There is a concern with applications and solutions to problems. Instead of focusing on methods, researchers emphasise on the research problem, and use all the approaches available to understand the problem. As a philosophical understanding for mixed methods, researchers convey its importance for focusing attention on the research problem in social sciences research, and using pluralistic approaches to derive knowledge about the problem.

## **2. The Quantitative Approach**

Quantitative social research was originated by the progress of the natural sciences in the nineteenth century. Such a progress was set out by social researchers who adopted at that time what was called the 'scientific method' in their investigations.

In applied linguistics, a number of researchers pointed out that the period, which went between 1970-1985 saw a significant increase of quantitative research. These researchers also highlighted that also a short time after this period, particularly in the 1990's, a growing sophistication of quantitative studies confirmed the coming of the age quantitative research in applied linguistics.

### **(a) Main Characteristics of Quantitative Research**

In below, some characteristic features of quantitative research are stated:

1. Using numbers: It is the most important feature of quantitative research. Naturally, all quantitative researches are centred around numbers.
2. A Prior categorisation: Because the use of numbers already dominates the data collection phase, the work required to specify the categories and values needs to be done prior to the actual study.
3. Variables rather than cases: Quantitative researches are less interested in individuals than in the common features of groups of peoples. That is, quantitative research is centred around the study of variables that capture common features and which are quantified.
4. Statistics and the language statistics: This is the most salient of quantitative research.
5. Standardised procedures to assess objective reality: quantitative researchers have sought to eliminate any individual-based subjectivity. The procedures

were done through standardising research to ensure that these procedures remain stable across researchers and subjects.

6. Quest for generalisability and universal laws: Numbers, variables, standardised procedures, statistics and scientific reasoning are all parts of quantitative quest for fact that are generalizable.

### **(b) Strengths and Weaknesses of Quantitative Research**

Supporters of the quantitative approach usually emphasise that it is systematic, rigorous, focused, and tightly controlled, involving precise measurement, and producing reliable and replicable data that is generalizable to other contexts.

Contrarily, the opponents of this approach view that quantitative research as overly simplistic, decontextualized, reductionist in terms of its generalisation and fails to capture the meanings that actors attain to their lives and circumstances.

### **3. The Qualitative Approach**

Qualitative research has been around for about a century in social sciences. Thus, the basic ideas and principles of qualitative research are not now new at all. Rather, in recent years, this research methodology has seen an explosion of texts, reflecting a growing interest in the approach across the disciplines of social sciences. In applied linguistics, there has been an increasing visibility and acceptance of qualitative research since the 1990's. This is related to the growing recognition that almost every aspect of language acquisition and use is determined or significantly shaped by social, cultural, and situational factors. Therefore, qualitative research is ideal for providing insights into such contextual conditions and influences.

#### **(a) Main Characteristics of Qualitative Research**

In below, some characteristic features of qualitative research are stated:

1. Emergent research design: The emergent research design means a qualitative research study is kept open and fluid so that it can respond in a flexible way to new details or opinions that may emerge during the process of investigation.
2. The nature of qualitative data: Qualitative research works with a wide range of data, including interviews, documents, and even images.
3. The characteristics of the research setting: Because of the qualitative approach nature that seeks to describe social phenomena as they occur naturally, qualitative research takes place in natural setting, without any attempts to manipulate the situation under study.

4. Insider meaning: Qualitative research is concerned with subjective opinions, experiences, and feelings of individuals. In this respect, the goal of qualitative research is to explore the participants' views of the situation being studied.
5. Small sample size: Qualitative research typically relies on the necessity to use smaller samples of participants.
6. Interpretive analysis: Qualitative research is fundamentally interpretive, which means that the research outcome is ultimately the product of the researcher's subjective interpretation of data.

### **(b) Strengths and Weaknesses of Qualitative Research**

Supporters of this research approach claim that the main advantage of such a methodology is that it has been seen as an effective way of exploring new uncharted areas. Besides, qualitative methods are seen to be very useful for making sense of highly complex situations. That is, the groundedness of qualitative research helps to distinguish real phenomena from intellectual fabrications.

As opposed to these merits, the qualitative approach is often criticised on the role played by the researcher in analysing the data. This may have negative impacts on the final results. For the proponents, this approach is not comprehensive since it lacks methodological rigour and appears to be unprincipled and fuzzy. To these, they add the problem of consuming time in that researchers agree on that the processing of qualitative data takes too much time in the analysis process.

### *Lecture Ten:*

*Theme 5, Sections: 4 to 6*

#### **I. Content**

4. The Mixed-methods Approach.
5. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
6. Let's Practice!
  - a. Written Feedback
  - b. Assessment

#### **4. The Mixed-methods Approach**

The real breakthrough in combining qualitative and quantitative research occurred in the 1970's. The mixed-method approach was first introduced with the adoption of the concept of 'triangulation' into social sciences.

In applied linguistics, over the period between 1995-2005 applied linguists called on for more engagement in the practice of a mixed-methods approach as the suitable research methodology wherein quantitative and qualitative methods are mixed since such a practice can offer possible solutions for the studied research problems.

##### **(a) Main Characteristics of Mixed-methods Approach**

In below, some characteristic features of the mixed-methods research are stated:

1. Expanding the understanding of a complex issue: A mixed-methods approach would broaden the scope of the investigation and enrich the researchers' ability to draw conclusions about the problem under study.
2. Corroborating findings through 'triangulation': The use of different data sources, investigators, theories, or research methods generates multiple perspectives on a phenomenon. Such an effective strategy ensures research validity.
3. Reaching multiple audiences: Because of the combination of the methods in mixed-methods research, the final results can be more palatable for certain audiences than outcomes of a monomethod study.

##### **(b) Strengths and Weaknesses of Mixed-methods Approach**

According to research methodologists, several arguments have been put forward about the value of mixed-methods research. This study can bring out the best of qualitative and quantitative researches. This is further argued by the potential that the strengths of one method can be utilised to overcome the weaknesses of another method used in the study. In addition, a mixed-methods research has a potential to produce evidence for the validity of research outcomes through the convergence and corroboration of the findings.

Contrarily, some proponents view that one cannot help wondering whether there is really a principled approach to guiding the variety of combinations so that we do not end up with a deficient research approach (Dörnyei, 2007).

*Lecture Eleven:**Theme 6, Sections: 1 to 5***I. Objectives****At the end of the theme, you should be able to:**

- understand what a research strategy is;
- make a distinction between strategies and methods;
- explain how a researcher chooses a strategy;
- make a clear connection between research strategies and research purposes;
- identify the common research strategies used in the field of social sciences in general, and educational research in particular; and
- discuss the essence and tenets of each one of these research strategies.

**II. Content**

1. What are research strategies?
2. Which strategy to choose?
3. Case studies
4. Experiments
5. Ethnography

**1. What are the strategies?**

A strategy is a plan of action designed to achieve a specific goal. Historically, the concept has had military origins relating to the role of generals. It was about the way they had a broad overview of operations, the way they planned specific combat tactics as part of a bigger plan for overall victory, and the way they relied on careful planning to achieve their goals.

In social sciences, a research strategy retains the same essential components. It requires:

- An overview of the whole project that uses the ‘bigger picture’ as the basis for deciding how to approach a research paradigm;
- a carefully constructed plan of action that is rationally designed and likely to offer the best prospects of success (a research problem); and
- a specific goal that can be achieved and which is clearly identified (a research problem).

## 2. Which strategy to choose?

To decide which strategy is likely to work best, the researcher needs to consider three key questions:

- Is it suitable?
- Is it feasible?
- Is it ethical?

The answers to these questions might point to a particular strategy as the favourite one, clearly standing out as the most suitable for the task at hand. It is crucial to answer these questions and make clear enough what strategy the researcher should opt for:

### 1. Is it suitable?

It is better to think of strategies in terms of how useful they are and also how appropriate they are. The justification for the choice of any specific strategy must depend on having a clear vision of the particular purpose for which it is being used.

### 2. Is it feasible?

The choice of strategy needs to take into account certain practical aspects of conducting research. The researcher must get access to the kind of data sources that the strategy requires. S/he also must be able to gain access to the kinds of people, and also be able to get access to the needed documents.

### 3. Is it ethical?

There are certain standard measures which researchers are expected to put in place to minimise the risk of harm. For social researchers, these involve guarantees that:

- Participants will remain anonymous;
- Data will be treated as confidential;
- Participants understand the nature of the research and their involvement; and
- Participants voluntarily consent to being involved.

## 3. Case Study

Some research methodologists define a case study as the following:

- ‘It is a specific instance that is frequently, designed to illustrate more general principle’ (Nisbet, Walt, 1984).

- ‘It is the study of an instance in action’ (Adelman et al., 1980).
- ‘It provides a unique example of actual people in actual situations, enabling readers to understand ideas more clearly than simply by presenting them with abstract theories or principles’(Cohen et al., 2005).
- ‘It is a strategy of inquiry of which the researcher explores in-depth one- or more individual programs, or processes, or event, or activity’ (Creswell, 2009).
- The main benefit of a case study then is that the form is one or few instances that usually allow the researcher to deal with the subtleties and intricacies of complex, social situations (Hoadjli, 2015).

#### 4. Experiments

A set of research methodologists define an experiment as the following:

- ‘It is to isolate individual factors and observe their effects in detail. The purpose is to find out new relationships and properties associated with the subject being integrated, or to test the existing theories’ (Denscombe,2010).
- ‘The point of experiment is to see how far a person will proceed in a concrete and measurable situation in which he is in order to inflict increasing pain on a protesting victim. At what point the subject refuses to obey the experiment?’ (Milgram, 1994).

In social sciences, the use of an experiment would appear to be restricted to those situations where it is possible to manipulate situation and impose control on crucial variables. To overcome this deficiency, some social scientists have turned to what they call the ‘Quasi-experimental’ Method as a more appropriate research strategy.

For many methodologists, the quasi-experiment method relaxes the probabilistic and population distinction imposed by the other types of research methodologies, ‘true’ experimental design, by shifting emphasis from "cause-effect" in temporal priority to ‘association’ between variables.

The main benefit of a ‘quasi-experiment’ research strategy is that research design is able to employ something approaching true experimental design in which researchers have control over what Campbell and Stanley (1963) refer to as ‘ the when and to whom of measurement’ but lack control over the ‘when and to whom of exposure’ or the randomization of exposures-essential if true experimentation is

to take place. Kerlinger (1970) refers to these situations as a ‘compromise design’ – an apt description when applied to much educational research where the random selection of schools and classrooms is impracticable (ibid).

## 5. Ethnography

The term ethnography literally means a description of peoples or cultures. It has its origin as a research strategy in the works of the early social anthropologists, whose aim was to provide a detailed and permanent account of the cultures and lives of small, isolated tribes.

Ethnography has the following characteristics:

- It requires the researcher to spend considerable time in the field under study.
- It requires the researcher gives special attention to the way the people being studied see the world.
- There is an acknowledgement that ethnographers’ final account of the group being studied is more than just description.

The main benefits of ethnography are as the following:

- It is a research strategy based on direct observation.
- It provides rich and wealthy data.
- It aspires holistic explanations which focus on process and relationships that lie behind the surface events.
- It has an open and explicit awareness of the role of the researcher in the investigation (Denscombe, 2010).

**Lecture Twelve:***Theme 6, Sections: 6 to 11***I. Content**

6. Grounded Theory (GT)
7. Action Research
8. Mixed-methods
9. Longitudinal
10. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
11. Let's Practice!
  - a. Written Feedback
  - b. Assessment

**6. Phenomenology**

Phenomenology is not primarily concerned with explaining the causes of things, but tries, instead, to provide a description of how things are experienced at first hand by those involved.

The phenomenological research generally deals with:

- People's perceptions of meaning;
- People's attitudes and beliefs; and
- People's feelings and emotions.

Phenomenology is concerned with matters, such as :

- The explanation of human experience;
- The description of everyday world;
- Seeing things through the eyes of others; and
- Reflecting multiple realities.

In sum, phenomenological research should involve a detailed description of the experience that is being investigated- one that does not gloss over the complexities and contradictions that inhabit real life.

The main benefits of phenomenology are examples as:

- It suits to small-scale research.

- It describes experiences in a way that is immediately accessible and interesting to a wide range of readers.
- It offers the prospects of authentic accounts of complex phenomena.
- It is a humanistic style of research (ibid).

## 7. Grounded Theory ( GT )

Grounded Theory is a research strategy dedicated to generating theories. In this sense, it contrasts with approaches concerned with testing theories, and is different from researches whose main purpose is to provide descriptive accounts of the subject matter.

It is a research strategy that emphasises the importance of empirical fieldwork and the need to link any explanations very closely to what happens in practical situations in the ‘real world’. It is different, here, from approaches that are thought up in the abstract as a neat system of ideas, and then afterwards checked to see if they work in reality.

This research strategy is well suited to the needs of four kinds of research:

1. Qualitative research
2. Exploratory research
3. Studies of human interaction
4. Small-scale research

In practice, this research strategy has not a particular method of data collection. However, in general, Grounded Theory lends itself to be better used in the collection of data in ‘raw state’.

In this respect, it is more appropriate to be employed to produce unstructured data through:

- Unstructured interviews;
- Open-ended questions; and
- Field-notes based on observations.

The main benefits of Grounded Theory are examples, such as:

- It is suitable to small-scale research;
- It recognises rationale for qualitative research;
- It is adaptable;
- It is a systematic way for analysing data;
- It is meant for developing theoretical propositions from data;
- It is based on explanations that are grounded in reality; and
- It is well-suited to the exploratory research (ibid).

## 8. Action Research

Action research is a research strategy based on with practical issues. These practical issues are about problem, concerns, and needs that arise as a routine part of activity in the ‘real world’. This specifically practical orientation has remained a defining characteristic of an Action Research.

In particular, Action Research as a research strategy has the following characteristics:

- It is aimed at dealing with the real-world problems and issues;
- It regards change as an integral part of research;
- It is concerned with active participants, not passive ones.

In terms of data collection methods, action research uses different techniques to collect information. Action researchers generally prefer questionnaires for such purposes. They may also retrieve data from the records, memos, and reports that the investigated content routinely produced. The benefits of Action Research as research strategy are examples as:

- It involves participation in the research for practitioners.
- It contributes to professional self-development.
- It is geared to improving practice and resolving problems (ibid).

## 9. Mixed-methods

Mixed –methods refers to a research strategy that crosses the boundaries of conventional paradigms of research by deliberately combining methods drawn from different traditions with different underlying assumptions. At its simplest, a mixed-method strategy uses both qualitative and quantitative methods.

In specific terms, a mixed-methods research strategy has three characteristic features. These can be outlined as follows:

1. It uses qualitative and quantitative approaches within a single research project.
2. It explicits forms on the link between approaches (triangulation).
3. It emphasises on practical approaches to research problems (pragmatism).

Drawing on the available literature, researchers use mixed-methods strategies for one or more of the following purposes:

- to improve accuracy;
- to obtain a more complete picture;
- to compensate strengths and weaknesses;
- to develop the analysis; and

- to be used as an aid to sampling.

Mixed-methods research strategy has its underpinnings in the philosophical assumptions of pragmatism. In context of research, pragmatism tends to revolve around the following core ideas:

- Knowledge is based on practical outcomes.
- Research should test what works through empirical enquiry.
- Knowledge is provisional; and
- Traditional dualisms in science are regarded as not helpful.

The main benefits of mixed-method research strategy are examples as:

- It is a more comprehensive account of the thing being researched;
- It provides clearer links between different methods and different kinds of data;
- It emphasises on the rationale for combining different approaches (triangulation); and
- It is a practical, problem-driven approach to research (ibid).

## 10. Longitudinal

Longitudinal research strategy refers to a family of methods that share something in common; information is gathered about the target of the research during a period of time. According to Dörnyei (2002) cited in Hoadjli (2015), a longitudinal research in an investigation in which:

- (a) Data are collected for two or more distinct periods;
- (b) The subject or cases analysed are the same or comparable from one period to the next; and
- (c) The analysis involves some comparison of data between the periods (p.78).

A longitudinal design, considering the above assumptions, would permit the measurement of differences or change in a variable from one period to another.

In terms of types, there are as many as four types of longitudinal design. These are:

1. Prospective longitudinal studies;
2. Repeated cross-sectional studies;
3. Retrospective studies; and
4. Simultaneous cross-sectional studies.

For research methodologies, longitudinal research strategy is advantageous because:

- It allows the researchers to collect information about change at the micro-level;

- it enables the researchers to save money and time; and
- it aids the researchers to gain data about changes across age groups

### *Lecture Thirteen:*

*Theme 7, Sections: 1 and 2*

#### **I. Objectives**

**At the end of the theme, you should be able to:**

- understand what data collection methods are;
- shed light on what a distinction between a method and methodology is;
- explain how a researcher opts for a specific data collection method; and
- identify what the tenets of each one of the studied data collection methods are.

#### **II. Content**

1. Questionnaires
2. Interviews

##### **1. Questionnaires**

Questionnaires are written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers (Brown, 2001). This data collection method is a useful instrument not only for collecting information, but also for providing respondents with structured, often numerical and analysing data in a straightforward way (Wilson, Mclean, 1994). The popularity of a questionnaire is usually due to the fact that this tool is easy to administer since it is versatile and uniquely comparable of gathering a large amount of information quickly and in a form that is readily processible (cited in Hoadjli, 2015).

To develop a questionnaire, a researcher should follow some stages. These are:

1. Develop a chart technique to plan the sequences of questions;
2. Take general purpose or a set of specific purposes and draw them into concrete fields;
3. Identify and itemize subsidiary topics related to the central purpose; and
4. Formulate information related to the different researched issues.

In terms of types of questionnaires, in particular, these concern mainly:

1. Structured Questionnaires;
2. Unstructured questionnaires; and
3. Semi-structured questionnaires.

The advantages of questionnaires can be stated in the following:

- (a) They can supply considerable amount of research data for relatively low cost in terms of time, money, and materials;
- (b) They are simple and easy to administer;
- (c) They provide standardised answers; and
- (d) They allow the speedy collection and analysis of data.

## 2. Interviews

An interview marks a move from seeing subjects as easily manipulable and data as somehow external to individuals that are usually expected to generate knowledge often through conversation (Kvale, 1996). It is a method that favours exchange and interchange of views between two or more people on a given topic of natural interest, with a central concern to emphasise the importance of human interaction for knowledge production and social situatedness of research data (Laing, 1967). For Rapley (2004), an interview is a social encounter where speakers collaborate in producing retrospective and prospective accounts of a version of their past (future), actions, experiences, feelings, and thoughts (cited in Hoadjli, 2015).

The procedures a researcher should consider and follow to carry out an interview are these stages:

*Stage 1: Thematising*

*Stage 2: Designing*

*Stage 3: Interviewing*

*Stage 4: Transcribing*

*Stage 5: Analysing*

*Stage 6: Verifying*

*Stage 7: Reporting*

In terms of types of interviews, in particular, these concern mainly:

1. Structured interviews;
2. Unstructured interviews; and
3. Semi-structured interviews.

The advantages of interviews can be stated in the following:

- (a) They are particularly good at producing data which deal with topics in in-depth and detail;
- (b) They require simple equipments, and are built on conversation skills;
- (c) They are flexible; and
- (d) They allow direct contact.

**Lecture Fourteen:***Theme 7, Sections: 3 to 7***I. Content**

3. Focus groups
4. Observation
5. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
6. Let's Practice!
  - a. Written Feedback
  - b. Assessment

**3. Focus Groups**

A focus group is a research method used to collect data through a group interaction on a topic determined in advance by a researcher, Dörnyei (2007) recognises that focus groups are sometimes treated as a sub-type of interviewing because both the format and the interviewer's role considerably resemble to some extent to what is taken part in the interviewing process. Cohen et. al., (2005) converge with this view. They add that two groups are a form of group interviewing, though not in the sense of backward and forward between interviewer and group. Rather, the reliance is on interaction with the group that discusses the topic supplied by the researcher. Hence, the participants interact with each other rather with the interviewer, such that the views of the participants can emerge the participants' rather than the researcher's agenda can predominate. It is a from the interaction on the group that the data can be collected (Hoadjli, 2015).

In focus groups, some basic characteristics need to consider. These are:

- Size: The size of a focus group has to range between 6-10 (sometimes 12) people.
- Composition: focus groups work better with homogeneous samples.
- Parallel focus groups: The standard practice is to run several focus groups in one research project.

The advantages of focus groups can be stated in the following:

- Orientation to a particular field of forms;
- Developing themes, topics, schedules for subsequent interviews and/or questionnaires.
- Generating hypotheses that derive from the insights and from the group;
- Generating and evaluating data from different sub-groups of a population; and Gathering feedback from previous studies (Morgan, 1988; cited in Hoadjli, 2015).

## 7. Observation

Observation is a data collection method which often offers the researcher the opportunity to gather 'live data' from the 'situations'. It enables the researcher to understand the content, to be open-ended and inductive, to see things that might otherwise be consciously missed, to discover things that participants might not freely talk about in interview situations, to move beyond perception-based data, and to access personal knowledge (Cohen et al., 2005). For Denscombe (2010), observation does not rely on what people say they do, or what they say they think. It is more straightforward than this. It is based on the premise that, for certain purposes, it is best to observe what actually happens.

To carry out an observation, the researcher should provide an observation framework. This procedure enables the researcher to realise these purposes:

- Be alert on the same activities and be looking out for the same things;
- Record data systematically; and
- Produce data which are consistent between observers.

The advantages of observation can be stated in the following:

- It allows researchers to see directly what people do without having to rely on what they say to do.
- It gives descriptive contextual information about the setting of the researched phenomenon.
- It provides answers to the problems associated with the selective perceptions of observers.
- It eliminates to some extent bias and subjectivity on the part of the observed people; and
- it gives a means to collect data in a relatively short time (Hoadjli,2015).

### *Lecture Fifteen:*

*Theme 8, Sections: 1 to 3*

#### **I. Objectives**

**At the end of the theme, you should be able to:**

- understand the meaning of what sampling is;
- explain the different functions of population and sampling;
- explain the tenets of the various methods of sampling;
- shed light on the characteristics of a good sample;

- make it clear enough for readers what the size of a sample is;
- have a look at the process of the sample cycle; and
- identify what representative sample is.

## II. Content

1. Meaning and Definition of Sampling
2. Functions of Population and Sampling
3. Methods of Sampling

### 1. Meaning and Definition of Sampling

Sampling is an indispensable technique in social sciences research. A research work cannot be undertaken without the use of sampling. The study of the total population is not possible and it is impracticable. The practical limitation cost, time, and other factors which are usually operative in the situation, stand in the way of studying the total population. The concept of sampling has been introduced with a view to make the research findings economical and accurate (Singh, 2006).

- Coharn W. G. defines the term sampling as:

‘In every branch of science we lack the resources, to study more than a fragment of the phenomena that might advance our knowledge’.

In this definition, a ‘Fragment’ is the sample as ‘phenomena’ is the population. The sample observations are applied to the phenomena i.e., generalisation.

- **David S. Fox defines the term sampling as:**

‘In the social sciences, it is not possible to collect data from every respondent relevant to our study but only from some fractional part of the respondents. The process of selecting the fractional part is called sampling’ (cited in Singh, 2006).

- **Cothari C. R. defines the term sampling as:**

‘A sample refers to the technique or the procedure the researcher would adopt in selecting items for the sample. Sample design may as well lay down the number of items to be included in the sample i.e., the size of the sample’ (1980, p.56).

- **Kumar R. defines the term sampling as:**

‘Sampling is the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting the prevalence of an

unknown piece of information, situation, or outcome regarding the bigger group. A sample is a subgroup you are interested in' (2011).

## **2. Functions of Population and Sampling**

Research work is guided by inductive thinking. The researcher proceeds from specificity to generality. The sample observation is the specific situation, which is applied to population. It is the general situation.

The sampling is the fundamental to all the statistical techniques and analysis. The measures of a sample are known as statistics and measures of a population. The accuracy of the measures depends on sample representativeness. In research work, generalisation is made by estimating measures on the basis of the sample.

## **3. Methods of Sampling**

In social sciences, two methods to sampling are used: (a) Probability Sampling and (b) Non-probability Sampling. In general, with probability sampling, all element (eg., persons, households) in the population have some opportunity of being included in the sample, and the mathematical probability that any one of them will be selected can be calculated. With non-probability sampling, in contrast, population elements are selected on the basis of their availability because they are volunteered, or because of the researcher personal judgment that they are representative. The consequence is that an unknown portion of the population is excluded (eg., Those who did not volunteer). One of the most common types of non-probability sample is called a 'convenience sample' not because such samples are necessarily easy to recruit, but because the researcher whatever individuals are available rather than selecting from the entire population because some members of the population have no chance of being sampled, the extent to which a convenience sample-regardless of its size- actually represents the entire population cannot be known. Specifically, these two methods (types) can be categorised as follows:

### **(a) Probability (random) Samples**

- Simple random sample
- Systematic random sample
- Stratified random sample
- Multistage sample
- Cluster sample.

## (b) Non-probability samples

- Convenience sample
- Purposive sample
- Quota sample

In more explicit terms, these methods are identified and characterised in the following points:

**(a) Probability Sampling**

A probability sampling scheme is one in which every unit in the population has a chance (greater than zero) of being selected in the sample, and this probability can be accurately determined.

Probability sampling includes:

• *Simple random sampling*

- Applicable when population is small, homogeneous, and really available.
- All subsets of the frame are given an equal probability of selection.
- It provides for greatest number of possible samples. This is done by assigning a number to each unit in the sampling frame.
- A table of random number of lottery system is used to determine which units are to be selected.
- Estimates are easy to calculate.

• *Systematic random sampling*

- It relies on arranging the target population according to some ordering scheme and then selecting elements at regular intervals through that ordered list.
- It involves a random start and then proceeds with the selection of every KTH element from then onwards. In this case,  $K = (\text{population size} / \text{sample size})$ .
- It is important in that the starting point is not automatically the first in the list, but is instead randomly chosen from within the first to the KTH element in the list.

• *Stratified random sampling*

- It is where the population embraces a number of distinct categories. The frame can be organised into separate 'strata'. Each stratum is then sampled as an independent sub-population, out of which individual elements can be randomly selected.
- Every unit in a stratum has the same chance of being selected.
- Using the same sampling fraction for all strata ensures proportionate representation in the sample.

- Adequate representation of minority subgroups of interest can be ensured by stratification and varying sampling fraction between strata as required.

- *Cluster sampling*

- It is an example of 'two-stage sampling'
- First stage a sample of areas is chosen;
- Second stage a sample of respondents within those areas is selected.
- Population divided into clusters of homogeneous units, usually based on geographical contiguity
- Sampling units are groups rather than individuals.
- A sample of such clusters is then selected.
- All units from the selected clusters are studied.
- Its advantage is that it cuts down the cost of preparing a sampling frame. This can reduce travel and other administrative costs.

- *Multistage sampling*

- It is a complex form of cluster sampling in which two or more levels of units are embedded one in the other.
- It is an effective strategy because it banks on multiple randomisations; as such, extremely used.
- It is used when a complete list of all members of the population does not exist and is inappropriate.

### **(b) Non-probability Sampling**

It is also known as non-parametric sampling which is used for certain purposes.

Non-probability sampling includes:

- *Convenience sampling*

- Sometimes known as grab or opportunity sampling or accidental or haphazard sampling.
- It involves the sample being drawn from that part of the population which is close to hand. That is, it is readily available and convenient.
- The researcher using such a sample cannot scientifically make generalisations about the total population from this sample because it would not be representative enough.
- This type of sampling is not useful for pilot testing.

- *Purposive sampling*

- It is used by some arbitrary method because it is known to be representative of the total population; or it is well known that it will produce well matched groups.
- Its main idea is to pick out the sample in relation to some criteria, which are considered important for particular studies.
- This technique is appropriate when the study places special emphasis upon the control of specific variables.

- *Quota sampling*

- It is based on first the segmentation of the population into mutually exclusive sub-groups just as in stratified sampling.
- Then judgment is used to select sub- subjects or units from each segment based on a specified proportion.
- It is this second step that makes the technique one of the non-probability sampling.
- It is an easy sampling technique; but, its disadvantage is that it is not a representative sample.

### *Lecture Sixteen:*

*Theme 8, Sections: 4 to 8*

#### **I. Content**

4. Characteristics of a Good Sample
5. Size of Sample
6. The Sample Cycle.
7. Let's Wrap-up!
  - a. Questions and Answers
  - b. Discussion/ Debate
8. Let's Practice!
  - a. Written Feedback
  - b. Assessment

#### 4. Characteristics of a Good Sample

The following are the main characteristics of a good sample:

1. A good sample is the true representative of the population corresponding to its properties.
2. A good sample is free from bias.
3. A good sample is an objective one.
4. A good sample is comprehensive in nature.
5. A good sample maintains accuracy.
6. A good sample is economical from energy, time and money.
7. The subjects of a good sample are easily approachable.
8. The size of a good sample is such that it yields accurate results.
9. A good sample makes the research work more feasible.
10. A good sample has the practicability for research situation (Singh, 2006).

#### 5. Size of a Sample

The size of the sample often depends on the researcher's precision to estimate the population parameter at a particular level. However, it is clear that there is no clear rule to determine the size of the sample.

The best answer to the question of size is to use a large sample. A larger sample is likely to be much more representative of the population. Furthermore, with a large sample, the data can be more accurate and precise. It was pointed out that in that the larger the sample, the smaller the standard error (ibid).

#### 6. The Sampling Cycle

Five stages of the cycle are proposed:

*Stage 1:* Identifying the universe population.

*Stage 2:* Applying techniques for the sample.

*Stage 3:* Accepting the sample.

*Stage 4:* Data producing sample.

*Stage 5:* Findings and generalisations.

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