

## Lessons for 2<sup>nd</sup> year sociology dr ABDALLAH OTSMANE

### 1- The Scientific Method Inductive vs. Deductive Approaches

Sociology is a science. As such, it is concerned with systematically observing and classifying facts, and

establishing verifiable laws. It, like any other science employs scientific method, which is the source for scientific knowledge. The scientific method is a logical system used to evaluate data derived from systematic observation. The scientific method as a precise way of designing and conducting research consists of the following basic steps: “(1) establishing a hypothesis, a general statement based on observed facts; 2) determining ways to test the hypothesis, incorporating them in research design; 3) testing the hypothesis through research and further observation...

Sociology as a science employs the two very important approaches in research design and in the overall research framework: inductive methods and deductive method. Inductive method is a method by which the scientist first makes observation and collects data, on the basis of which he or she formulates hypothesis and theories (Scupin and DeCorse, 1995). The researcher tries to build theories from particular observations and instances. Induction moves from the particular to the general; where as deduction moves from the general to the particular. In deductive approach, the researcher attempts to derive specific assertions and claims from a general theoretical principle. In short, deductive approach in research goes from general theory to particular claims.

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- In **deductive approach**, the researcher attempts to derive specific assertions and claims from a general theoretical principle.

As a science, the primary aim of sociology is doing research; to produce, accumulate, and disseminate scientific knowledge on society and social phenomena. However, there are some people who question the scientific status of sociology and other social sciences.

They argue that sociology is not strictly science because its subject matter is very much complex. It is not possible to subject human behavior into laboratory manipulations. People have their own motives and hidden aspirations and other complex aspects.

## **2-Steps in Sociological Research**

### **Identification of Research Problems**

The first step in doing sociological research (for that matter, any other research) is to come up with a research problem. Identification of research problem

basically involves choosing a research topic. The ways and manners in which researchers identify a research problem and choose a topic vary according to various factors. The research interests of sociologists are, often,

triggered by their own life experiences and observations. The initial ideas for research thus may occur at any time and place for a researcher. Walking down a street, reading through newspapers, watching television, etc may suggest a topic of research for an observing and curious person. Once a research topic comes to our mind, we should ask the following questions:

- Is it researchable?
- Is it sociologically/ socially significant?

- What is new about it?
- What gap will it fill?
- Is it manageable in terms of time, money, expertise and other resources? In other words, do you have the needed resources to do the research?

If you answer these and other related questions adequately, then you are on the right track to conduct the research.

## **Literature Review**

This step involves familiarizing or orienting yourself with the concepts, theories and the works already done pertaining to the topic identified. Relevant available literature on the topic chosen should be reviewed; we should also check out what works have already been done by others, what gaps are remaining, what questions remain unanswered, etc.

Research work normally proceeds by reviewing earlier works on a specific research problem one has identified. The researcher will need to review past works on the question he or she is raising (Dooley, 1995). The

traditionally dominant source for literature review has been libraries and documentation centers where books and various references are found in card catalogued manner. Nowadays, most libraries maintain a computerized filing system, whereby references are made available via electronic online methods. Searching literature has become very easy, thus, with the computerization of library sources; one can easily access them if Internet connection is available

Literature review is necessitated by the fact that a researcher is probably not the first person to develop an interest in a particular problem;

## **Hypothesis Formulation**

Hypothesis is a statement that can be proved to be correct or incorrect. Hypothesis formulation involves identifying basic research objectives and determining research questions. This should be tested empirically.

We put some guiding assumptions to the research in this step. We ask some basic research questions. However, we may note that this may not be always the case. The type of research may determine whether hypothesizing is needed or not. For example, in exploratory studies hypothesizing may not be needed.

## **Selections and Designing of Methods of Data**

**Collection** Here the researcher determines data collection methods and prepares data collection instruments. He/she chooses from among the different data collection methods. There are generally two categories of methods:

### **Quantitative methods and qualitative**

methods. Quantitative methods focus on measuring quantity of information: terms such as prevalence, scope, percentage, frequency, magnitude, etc are very important. On the other hand, qualitative methods focus on depth and quality of information. The complex, detailed and sensitive aspects; belief, attitudinal and knowledge dimensions etc are usually studied by qualitative methods.

## **Conducting Data Gathering Activity**

This is the step in which the researcher engages in collecting the needed data by using the various methods and instruments. The researcher goes to the field and

collects the data. He/ she trains data collectors, supervises the overall data collection process, and so on. Data collected thus may be of two types: primary and

secondary data. Primary data are firsthand and original information; the researcher firsthand collects them. They are collected by the sociology themselves during their own research using research tools such as **experiment, survey, questionnaire, interviews and observation**

On the other hand, secondary data are those which are already collected by some one else found in various sources as documents or **archives**. They include: official statistical documents, mass media sources (such as electronic media – radio, television, films, etc; and print media such as newspapers, magazines, journals, posters, brochures, leaflets, sign