Unit 12
Types of Research

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Learning Objectives

It is expected that after reading Unit 12 you would be able to

❖   Explain what is research

❖   Understand different purposes of research

❖   Gain familiarity with different types of research and their use at the level of techniques.

12.1 Introduction

Unit 12 is the first unit of Block 4 in Book 2 of MSO 002. Since Book 2 has the aim of initiating you into the world of research methods and techniques, it focuses on the very idea of 'research' and the types of research. The main purpose is to explain what is involved in different types of research and how you can make use of the alternatives available of different techniques of research. You need to basically try and become familiar with different ways of categorising a piece of research. At the same time you need to appreciate that none of the types mentioned is an exclusive type to the total exclusion of another type. In fact, synthesis and spirit of eclecticism® are likely to help you navigate more smoothly through a research process. You need to be an informed researcher and that is why the units of Block 4 are there to bring to you a higher level of sensitivity in matters of research.

12.2 What is Research?

Research refers to a systematic study of one's chosen subject for arriving at both new and valid conclusions. In sociology, we claim to engage in scientific research of social phenomena.

How does a research become scientific? If your study of a subject has followed a method or logic of investigation, you can claim your research was scientific. Scientific research engages in a search into one's chosen subject with the aim of contributing to the body of existing knowledge on that subject. Your production of scientifically reached knowledge has to pass through a process of investigation leading to valid conclusions. Validity of your conclusions would depend largely on the methods you have followed to conduct your research. Validity® would also depend on

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how well you have applied those methods. Those evaluating your research would also look at the way your findings have contributed to a theoretical understanding of the subject of your research.

Does the above tell you what is research? Perhaps it does not. It gives you a broad idea of what one means by research and how a research can become scientific. In our statements above we have used several terms (especially 'one's chosen subject', theoretical understanding, and validity). An elaboration of those terms will clarify what is research. So, let us pick up those terms and explain them.

We have mentioned 'one's chosen subject'. This means there is a clear indication of choice in deciding the topic of research. In fact, this is the entry point. How does one select the subject or problem of research?

The choice depends on multiple factors. It may seem a fairly straightforward matter but, at times can become a matter of prolonged debate, doubt and conflict. For example, you may refer to Madan (2004: 191-207), who has described in detail how and why he chose to study his own community, the Pandits of the Kashmir valley. Sjoberg and Nett (1992) in their book on *A Methodology for Social Research* have mentioned that fashions, fads and foibles may affect the choice of topic of many researchers. Some may wish to improve the prevailing conditions of some aspect of life and may decide to work on some socially useful piece of research. Others may like to work on a problem considered important enough for scientific investigation.

So notwithstanding how and why you have chosen a problem to research, you would find it very useful to ask yourself the questions which Bernard (1994: 103) has suggested that all researchers need to ask.

❖   Does the subject of your research really interest you?
❖   Is it possible to carry out a scientific inquiry on the topic of your research?
❖   Do you have enough resources to start and complete your research?
❖   Are you likely to face any ethical or moral problems by asking your research questions or by using certain methods and techniques of research?
❖   Is the subject of your research theoretically significant and interesting?

You may find the above questions banal but I feel Bernard's advice is good for those who are not yet experienced researchers. Such questioning helps a research to probe deeper into the reasons of one's selection of a research topic. The second term that we used was 'theoretical understanding'. What is meant by this expression? Theory has to do with abstraction of facts. A fact is an observation that can be empirically verified. If on the basis of observation of empirically verified facts, if you are able to i) construct an abstraction, ii) prepare a conceptual frame that would help you systematise, classify and interrelate the

relevant facts and iii) sum up the facts in the form of empirical and systemic generalisations, we can say, you have gained a theoretical understanding of your chosen subject. Theoretical understanding helps us to sometimes predict logical outcomes of certain combinations of facts. At other times, such theoretical understanding may indicate the gaps that may exist in our knowledge of the subject.

Coming to the point of validity, in brief we may say that validation refers in the first instance to a 'common sense analysis' or stating what one's chosen subject is all about or what is its current status. Regarding further steps in seeking validation of a subject, we would study later in the context of both quantitative and qualitative methods of research. Of course you are not supposed to rely on logical and common sense validation alone because such validation belongs to the category of plausibility only and it can never be definitive. You will need to use a scale to measure validity. This is a matter you will learn later in this course.

We may now proceed to discuss the types of research that you may find in the corpus of sociological literature. But before talking about the types, let us remember to dispel certain notions about sociological researchers.

While giving an example of social work research, Reid (1995: 2040) has pointed out that research is not always what you would call 'scientific'. It may be limited to gathering useful information. Many times such information is very important for planning a certain action and making crucial decisions. Further data collected in such a research work may lead to the construction of a theory at some later stage. You may therefore conclude that there is no need to denigrate research that produces useful information without going into heavy theoretical explanations.

You would, on the other hand, do better to recognise that at times mere collection of facts does not lead to a fuller comprehension of social reality. Therefore data need not be collected for the sake of collecting data alone. For an understanding of the phenomenon you need to be able to build a conceptual and theoretical scheme that would help you to interrelate a larger body of facts and interpret them in a systematic manner.

Further, in order to carry out scientific research, you need to go beyond the time and space of your own research setting and seek a generalisation on the basis of your findings. This attribute of your research would make it applicable to other areas of knowledge.

Finally, you need to recognise that knowledge produced after a long process of research is not just for the sake of producing knowledge. As Wallerstein (1997: 1250) said, production of knowledge is geared to 'the search for the good of society'. At this point, I would suggest that you

go back to the first sentence of the Introduction to Book 1. This will make you see the sense of training yourself in research methodologies and methods of social research.

Let us now delineate the basic types of research after completing the following Reflection and Action 12.1.

Reflection and Action 12.1

Read Madan's (2004: 191-207) article, In Pursuit of Anthropology, and then think about your own interest in deciding to enrol in the Master's Degree programme at IGNOU. Write a note of five hundred words on "Why would I like/ not like to conduct research on a subject of my choice?"

12.3 Types of Research

As already mentioned above, you may come across research that is heavily theoretical while there may be a research specifically conducted for the pragmatic reason of collecting facts to be able to make decisions. You already know that irrespective of the fact that a research is scientific, theoretical or pragmatic, it has to be methodical and make use of established research methods. In fact, this is one of the reasons why you are reading this course. Mere use of research methods would not, however, make your research scientific. It would be scientific when you would deal with concepts, theory or theoretical discourses in the field of your discipline. This is why in Book 1 you read all about of theoretical contributions different schools of thought in sociology to understanding the social reality. In this sense, you would discover that there are hardly any shortcuts in the world of research and there are no alternatives to a long-drawn process of research. But you do certainly have alternative types of research to ponder about before deciding the way you would like to design your research. This is why we talk about types of research.

You can combine with advantage several types of research in your own inquiry. Please do realise that many of them work better in combination through their placement as specific types may give the impression that each type is a distinct entity not compatible with another type. Before going over to the list of types I would like to stress that you need to take each type as a possible candidate for fruitful incorporation in your research. Often, lengthy debates on the merits or demerits of particular types have made inexperienced researchers feel they need to take a stand while deciding to use a particular method of research.

To my mind these debates were useful to the extent they highlighted multiple uses of each type but they were also the source of doubt and conflict in the minds of researchers. Very early during the development of scientific research, there was the debate about inductive and deductive research. Adherents of each type fought over the merits of one over the other (see Unit 1 of Book 1). Then there was the discourse on the value

of theoretical research versus a mere collection of facts. Social scientists began to make distinctions between pure and applied research. The debates ended for many with the realisation that the two elements were not opposed to each other. Both could be profitably used as needed for one's research project (see Box 12.1 on Myrdal's (1944: 1130) advice).

Box 12.1 Myrdal's Advice on Combining Quantitative and Qualitative Researches

The ideal community study should start out from a careful statistical analysis of vital, social, and economic data concerning the individuals and families making up the community being studied. The less measurable data on attitudes, cultural traits, behaviour patterns in which social stratification is expressed, and the 'feeling' of social status or toward social status on the part of members of the various groups, should then be observed and the results integrated into the framework of statistical knowledge.

Let us now look at the list of possible types of research. Similar to the arrangement of Sarantakos (1998: 6-8) into fifteen types of social research, we bring here a list of research types arranged in pairs.

❖ Basic and applied
❖ Descriptive and analytical
❖ Empirical and exploratory
❖ Quantitative and qualitative
❖ Explanatory (causal) and longitudinal
❖ Experimental and evaluative
❖ Participatory action research

If you look at the name of each type, it would become clear that they represent different aspects of research and it is quite possible for you to mix and match them. Combining different types of research would depend on the purpose of your research. It is not out place to see Box 12.2 for different purposes of one's research.

Box 12.2 Different Purposes of Social Research

One of the purposes may be to understand a phenomenon that has so far been not researched. If researched, it may be based on unauthentic information. A research carried out with the explicit purpose of this nature is generally called exploratory or formulative research.

Another purpose may be to work further on some already known and explained phenomenon. It may involve testing a set of hypotheses in the area of one's chosen subject of research. Research with this purpose is known as descriptive research.

Yet another purpose may be to establish a causal relationship among the variables in a 'laboratory' type of setting. A research with this purpose is given the name of experimental research.

Let us now discuss each pair of the above list in detail. Besides this discussion there is in the three books of MSO 002 each type dealt in detail.

i) Basic (or pure or fundamental) and applied research

You can look at basic research as pure or fundamental research because it concerns the principles or laws or fundamental rules and aims of achieving knowledge for its own sake. It pertains to the quest for knowledge about a phenomenan without concern for its practical use. You can do pure research to verify and remove doubts. If the doubt proves correct, you can modify the concerned principles and laws according to the conclusion and results of pure research. You can argue that there is nothing so practical as a good theory. For instance, developing a theory pertaining to the functioning of group mind (collective behaviour) or group dynamics can serve very useful purposes. You can also use pure research to reject or support existing theories about social phenomena. Sociologists have generally carried out pure research in order to discover laws governing social phenomena. Pure research is quite often the basis of evolving necessary concepts and technical terminology.

While pure research discovers principles and laws, applied research discovers ways of applying them to solve social problems. Applied research focuses on analysing and solving social problems. In sociology, we carry out applied research in the fields of social, semi-social, and socio-psychological problems. Sociologists work on pure research when they seek to find out why crime is committed or how a person becomes a criminal.

If some sociologists try to find out how one can rehabilitate criminals and control their deviant behaviour, you would say that they are engaging in applied research. For instance, sociologists making a study of nature and the extent of drug abuse among truck and auto-rickshaw drivers or among industrial workers are working for pure research. If this is followed by a study of how to reduce drug abuse among truck and auto-rickshaw drivers, it will be applied research.

Besides social problems, you can use applied research for social planning, social legislation, social hygiene, religion, etc. For instance, research in the field of family planning aims at the application of some principles. You can argue that sociology can elevate its importance by emphasising applied research.

ii) Descriptive and analytical research

Descriptive research describes a social situation, social events, social systems, social structures, etc. Its main purpose is to describe the state of affairs as it exists. For instance, a study of drug abuse would cover questions like the extent of drug abuse among college students, the nature of drugs taken, the causes of taking drugs, the sources of drugs, the effects of taking drugs, etc.

In the social sciences we often use the term *ex post facto*[@] research for descriptive studies. The main characteristic of this type of research is that researchers have no control over the variables; they can report only

what has happened or is happening. Descriptive research uses the survey. It describes accurately and precisely a wide variety of the characteristics of the population in general as well as the population of different regions and communities.

In analytical research, the researcher has to use facts or information already available, and analyse them to make a critical evaluation of the material. Looking beyond the ideas, facts and figures already collected, a social analyst assumes that behind the accumulated data there is something more important and revealing than the facts and figures. The assumption is that carefully collected facts and figures, when related to other variables present in the entire body of data, reveal a significant general meaning, from which you can draw a valid generalisation. The further assumption is that social analysis is a continuous process throughout the entire research undertaking. The function of systematic analysis is to build an intellectual edifice where you place properly sorted and sifted facts and figures in their appropriate settings and consistent relationships, so that it is possible for you to draw a general inference from them.

Facts and figures do not speak for themselves; they are not free and equal. They have many qualifiers[@] (ifs and buts) of varying complexities, sources, and structures. Facts are never simple. The analysts need to view facts and figures in conjunction with the subjective reactions to them. Social analysis demands a thorough knowledge of one's data. Without penetrating and insightful knowledge, analysis is worthless. The very first step in analytical research is a critical examination of the assembled materials, keeping steadily in mind the purpose of the study and its possible bearing on scientific discovery. Re-reading and re-examining the gathered data stirs the imagination of the analyst and induces a new way of looking at the problem and the data.

One of the tasks in the analysis of data, especially those pertaining to social and personal problems, is the establishment of a cause-and-effect relationship. It is imperative to look for the whole range of causal factors which generally play a significant role in bringing about a complex social situation.

It is time now to complete a quick Reflection and Action exercise to make sure that you can identify descriptive and analytical research. Of course, one needs to realise that even a primarily descriptive study would include some kind of analysis and conversely a highly analytical research would contain some amount of straight description. In this sense, you are not to look for purely descriptive or purely analytical studies. You need to look at the essential character of a piece of research, leaning heavily in one or the other direction in order to label it as descriptive or analytical. As mentioned earlier each type of research has its use in the world of knowledge. So let us complete Reflection and Action 12.2 and then proceed to the discussion of another research type.

iii) Empirical and exploratory research

Empirical research relies on the experiences or observations alone, often without due regard to systems and theory. It is data-based research, coming up with conclusions which are capable of being verified by further observation or experiment. In such a research it is necessary to get first hand facts to have a working hypothesis, and to set up an experimental design. Such research is appropriate when proof is sought that certain variables affect other variables in some way. Evidence gathered through experiments or empirical studies is a powerful support for a given hypothesis.

Generally, exploratory research is qualitative which becomes useful in formulating hypotheses or testing hypotheses and theories. In this research, the assumption is that the researcher has little or no knowledge of the problem or situation under study, or is unfamiliar with the structure of the group under study. See Box 12.3 for an example of a researcher interested in exploring students' unrest in a university campus.

Box 12.3 Example of an Exploratory Type of Research

One interested in understanding the reasons of student unrest will study dissatisfaction of students with the various problems they face, administrators' apathy to these problems, students organising under a leader for demonstration, *gherao*, strike, etc; types of student who become active, the support they seek and get from outside agencies, how widespread the unrest becomes, how it is suppressed by police, how leaders are arrested, and how authorities are pressurised to concede some demands.

Exploratory studies are also appropriate for some persistent phenomena, like deficiencies in the functioning of educational systems, corruption among the political elite, harassment by police, rural poverty, etc. Exploratory studies are quite valuable in the social sciences. They are essential in a researcher breaking new ground.

iv) Quantitative and qualitative research

Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity. This type of research is based on the methodological principles of positivism and others to the standards of strict sampling and research design.

Qualitative research presents a non-quantitative analysis or is concerned with a qualitative phenomena, that is a phenomenon relating to or involving quality or kind. For instance, a researcher may want to investigating the reasons for human behaviour, he or she should use techniques such as word association tests, sentence completion tests, story completion test, and similar other projective techniques. Qualitative research is especially important in the behavioural sciences where the aim is to discover the underlying motives of human behaviour. See Box 12.4 for the view that finds no dichotomy between quantitative and qualitative types of research.

Box 12.4 Ramkrishna Mukherjee's View on Quantitative and Qualitative Research

Mukherji and Sengupta (2000: 242) interviewed Ramkrishna Mukherjee on the methodology of social research and Ramkrishna Mukherjee clearly spelt out in the following words the relationship between the two types.

Quality-Quantity is not a dichotomy. There is no 'either/ or' between them. Quality refers to only 'distances' in variations, which are not known to us and, therefore, cannot be measured. Our job is to find out what are these 'distances' and how to measure them. .... This distance is the variation between entities we are concerned with. It may be individuals; it may be anything.

You will read in more detail about the two types of research while reading Blocks 5 and Block 6 in Book 2 and Block 7 in Book 3. It may be worth mentioning that you can distinguish the two types of research in terms of their technical and epistemological levels. In terms of the technical level, both types offer you a choice of alternative methods. You can select either or both as per their relevance for your research. At the technical level, there is not much of a dichotomy between the two types. But at the level of epistemology, the two types of research address quite different ways of looking at knowledge about social reality (see Bryman 1988: 50). Generally, positivists, who use surveys and experimental methods, carry out quantitative research. Those who critique positivist epistemology carry out qualitative research. This is the reason why there exists the notion of a dichotomy between the two types of research. At the level of technique you can happily agree with Ramkrishna Mukherjee and not treat them as dichotomous[©].

v) Explanatory (or causal) and longitudinal research

Explanatory research explains the causes of social phenomena. It aims to establish a relationship between variables, i.e., how one is the cause of the other, or how when one variable[©] occurs the other will also occur. For instance, explaining the relationship between broken families and juvenile delinquency, or between drug abuse and the lack of family control, or between a students' strike in a college and the apathy to solving students' grievances.

Explanatory (or causal) research is mainly concerned with causes, or the

'why' factor, about a phenomenon. It does not involve comparison and the factors of change. For instance, research on violence against women would like to answer the question why men commit violence. Then, it is an example of explanatory research. The hypothesis in an explanatory research expresses the relationship between two (or more) variables, and the research design focuses on ascertaining the 'why' aspect of the correlationship. The correlationship studies should not be confused with causal studies, as they are not synonymous. Two variables in a hypothesis may be related to each other either positively or negatively but may not have a causal relationship.

Longitudinal research involves the study of a problem or the same body of phenomena over a period of time, for example, prevalence of AIDS among males and females in India in 1979, 1989, and 1999. Such studies indicate the trend. The research can also be cross-sectional. This study covers a broad range of phenomena at a single point in time.

vi) Experimental and evaluative research

Experiments are, theoretically, the purest way of dealing with the problem of cause and effect. Therefore, the experiment is the most sophisticated way of getting at the problems of explanation. Ideally, in this type of research the researcher would like to show that 'X' causes 'Y'. In order to show that 'X' causes 'Y' the researcher will have to demonstrate that 'X' was both a necessary and a sufficient cause of 'Y'. i.e. the researcher will have to show that 'X' must occur in order for 'Y' to follow, and that 'Y' is the result of 'X', or nothing else.

Controlled experiments involve the manipulation of circumstances. The researcher needs to identify factors which are significant and then introduce them to or exclude them from the situation so that their effect can be observed.

The identification of causal factors, the introduction or exclusion of factors to or from the situation enables the researcher to pinpoint the factors that actually cause the observed outcome to occur.

Observation and measurement: Experiments rely on precise and detailed observation of outcomes and changes that occur following the introduction or exclusion of potentially relevant factors. They also involve close attention to the measurement of what is observed.

Controlled Experiment Research may be in a laboratory settings or in field settings. Laboratory experiments are usually of short duration and involve close control of variables to isolate causal factors. They involve meticulous observation and measurement.

Such a method involve a uniform procedure and allow the researcher to measure a specific trait. But laboratory experiments, at the same time, do not allow the researcher to study things in natural settings. They can be expensive and have restricted applicability. It is difficult to assess the extent to which the test results reflect the respondent's experience of

the test situation itself rather than the specific ability or aptitude under investigation. Lab setting may produce an artificial environment, which may affect the test results, and data generated under artificial setting may seem shaped up.

Another kind of experimental research involves an experiment carried out in natural settings. In studies like levels of income of individuals, or the issue of poverty, the level of smoking in office premises, etc., the researcher cannot manipulate circumstances. It is neither feasible nor ethical to impose controls in such studies. Therefore, they are to be studied in their natural environment. Such studies are also of longer duration and expensive too.

To tackle the situation some social scientists have resorted to a quasi-experimental approach. In this case researchers are on the lookout for 'naturally occurring experiments', situations in which they can see the possibility of observing and measuring the impact of isolated variables through circumstances as they happen, without imposing artificial control. For example, displacement of people as a consequence of a mining project could be called a 'naturally occurring experiment'.

Social workers have become increasingly involved in evaluative research. The essence of evaluative research can be reduced to the following three basic questions.

How effective is the program (or agency, procedure, or administrative structure)?

How efficient is the program? This generates the question of cost benefit or cost effectiveness of the program.

Should the activity continue? Is the program effective or efficient? If not, is it right to continue the program? Also, researcher should not ignore the points like, is the program sound on moral or legal grounds? A competent evaluator may not ignore the value problems presented (see Mark and Henry 2004).

vii) Participatory action research

From its beginning, action research had its involvement with practical issues, the kind of issues and problems, concerns and needs that arise as a routine in the real world. This practical orientation remained a defining characteristic of action research (see Gustavsen 2003). There are the following four defining characteristics of action research.

Practical: It is aimed at dealing with real world problems and issues, typically at work and in organisational settings.

Change: Both as a way of dealing with practical problems and as a means of discovering more about change in social phenomena, is regarded as an integral part of research.

Cyclical process: Research involves a feedback loop in which initial findings generate possibilities for change, which are then implemented and

evaluated as a prelude to further investigation.

Participation: Practitioners are the crucial people in the research process. Their participation is active not passive.

Within itself, action research includes two stages. In the first stage the research is carried out and in the second stage practitioners apply knowledge generated from research. The two processes of research and action are integrated. But this integration of research with practice limits the feasibility of exercising control over the factors of relevance to research. The setting for research generally does not allow the variables to be manipulated or controls to be put in place, because research is conducted not alongside routine activity but actually as part of that activity (see Chandler and Torbert 2003).

12.4 Conclusion

Unit 12 has explained what is research and with what sort of purpose does one carry out a piece of investigation into the nature of the social reality. The list of various types of research is simply to provide you familiarity with different labels that we sometimes attach to sociologists' work. In real life, it is not all that easy to put a research into a particular slot. The reason for listing of different types of research in Unit 12 is merely to indicate that often researchers incline to focus on one or the other type. Their inclinations help us to evaluate their contributions to the corpus of sociological inquiry about social phenomena.

In a similar vein, we will discuss the subject of research methods and research design before embarking on particular ways of carrying out sociological research.

Further Reading 📚

Mukherji, P. N. 2000. *Methodology in Social Research; Dilemmas and Perspectives.* Sage Publications: New Delhi

Srivastava, Vinay Kumar (ed.) 2004. *Methodology and Fieldwork.* Oxford University Press: New Delhi

Unit 13
Methods of Research

Contents

Learning Objectives

It is expected that after reading Unit 13 you would be able to

❖ Appreciate the importance of research methods in the social sciences

❖ Clarify the relationship between methodology and methods

❖ State the elements of research methodology and types of data generally used in social research

❖ Describe the various research methods.

13.1 Introduction

Learning about research methods would help you find out how we get to know what we take as facts. Lack of adequate nutrition makes you suffer from malnutrition. Polluted water causes jaundice. Regular exercises keep one fit and free from common diseases. How do you come to these facts? Some researchers in some places must have carried out studies to find each of the above facts.

When you ask how a particular researcher has gone about making a study, you are basically inquiring about the researcher's methods. There are some common ways of carrying out one's research and Unit 13 is going to talk about such methods. It will also describe the various steps in the research process. The unit will also once again clarify the difference between methodology and method and explain the subtle relationship between the two terms. Understanding the ways of systematic research is to prepare you to undertake your own mini research project. Please note that the project will comprise one of your assignments.

13.2 Centrality of Research Methods in Social Sciences

In the social sciences, the identity of the disciplines depends largely on the methods its practitioners use. In other words, you cannot ignore the

centrality of methods in the social sciences. Most of social science disciplines borrowed the methods from the natural sciences, though they study matters quite different from matters in the natural sciences. As a result, the social sciences are continuously engaged in resolving the contradiction between the materials pertaining to social phenomena and methods belonging to the study of natural phenomena. As mentioned in the introduction to Block 4, the methods refer to technical rules that define procedures for collection and analysis of data. If there are various methods of data collection, there are also several methods of data analysis, such as statistical inference, sampling and new forms of computer-based qualitative data analysis. There are also methods of research inquiry such as the formulation of the research problem, methods of constructing hypothesis, concepts, theories and propositions.

If understood in this frame, methods lay down the procedure for generation of reliable and objective knowledge. Researchers are not free to formulate a questionnaire, conduct an interview or carry out participant observation the way they like. They need to follow definite and well-accepted procedures to ensure that the knowledge generated methods turns out to be objective, authentic and reliable.

13.3 Interface between Methodology and Methods

Once more to clarify, we draw your attention to the fact that methodology refers to the broad theoretical and philosophical frame into which the procedural rules fit. The study of the interface between methods and methodology is called the 'philosophy of social research' (see Hughes 1990). It explores the manner in which the broad philosophical and methodological orientations validate and authenticate the procedural rules for collection and analysis of data. According to Brewer (2000) the causal relationship could be stated in the following manner.

The success of a research pursuit is largely determined by the methodology on which it is based. You already know that research methodology is a broad frame of the research process; it elucidates the theoretical orientation with which the research process is to be carried out that guides the choice of methods and techniques to be used. Sociologists like to believe that what gives social research its scientific flavour is the inductive approach that helps the researcher to arrive at broad generalisations.

You may be wondering why we are discussing methodology while Unit 13 is on methods of research. Hope the above discussion has clarified that it is necessary to be clear about one's methodology in order to arrive at procedural rules or methods of one's research. This is why we are now going to discuss basic elements of methodology, which in turn help us to decide the particular methods to be used.

Before moving to Section 13.4 it is a good idea to complete Reflection and Action 13.1.

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Reflection and Action 13.1

Read the Introduction to Book 1 and 2 and work out how theory and research are linked. Discuss what each contributes to the other. Then identify a topic of your interest and specify the range of social phenomena this topic will address. In Reflection and Action 13.2 you will continue this exercise.

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13.4 Elements of Research Methodology

The basic elements that build research methodology are

i)   Concepts
ii)   Propositions or Hypotheses
iii)   Theories.

The three elements provide the scaffolding to reach a research methodology. All three elements are related to each other in a cyclical fashion. While you can define a concept by using a theory, the concepts in turn shape the content of theories. Let us now acquaint ourselves with each of the three elements.

Concepts: Concepts are the building blocks of social research. You can define a concept as a short hand representation of a variety of facts. It is the significant symbol/ component of social scientific language. All concepts are essentially the abstractions of reality. A reality has several dimensions; hence a concept can convey several meanings and impressions. The concepts are defined according to the theoretical orientation of the researcher and bring coherence into the abstraction of the phenomenon under study. The concepts then form the bases of the theories (see Box 13.1 for defining the term 'concept')

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│ **Box 13.1 Babbie's (1989: 126) Definition of the term 'Concept'**
│ A concept is "a mental image we use as summary device for bringing together observations and experiences that seem to have nothing in common {...} they do not exist in the real world, so they can't be measured directly".
│ Babbie (1989: 126) has further explained the word 'conceptualisation' in the following words,
│ "Conceptualisation is the process of specifying the vague mental imagery of our concepts (by) sorting out the kinds of observation and measurements that will be appropriate for our research." (For measuring a concept you need to translate the concept into measurable indicators.)
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Propositions/ Hypotheses: Propositions are the statements of interrelationships among concepts. The definitions of particular concepts as subjects of research involve explicit or implicit contrast between the concepts under consideration and the set of all other possible subjects

chosen from the same universe. For instance, while inquiring into the domain of human groups with special reference to peasants, the term peasant is defined as a type of person or community having particular characteristics that contrast with urban dwellers, tribals, etc. I suggest that you look once again at Unit 3 of Book 1 to learn more about hypotheses.

Theories: You can understand theories as the systems of concepts and propositions that explain the relationships and underlying principles characterising a phenomenon. There could be "grand range" theories, which attempt to fit together in logical pattern vast areas of human behaviour. There could also be a theoretical system with a modest scope involving a small number of concepts and propositions. Theories differ with regard to their effectiveness as the sources of propositions that can be tested by empirical research. Hence, you cannot say that a theory has been "proved". However, successful verification of propositions or hypotheses always has implications for the theoretical system to which it relates. Each such verification strengthens the theory.

It is time now to complete Reflection and Action 13.2.

Reflection and Action 13.2 (continuation of Reflection and Action 13.1)
Identify and specify the major concepts and variables, relating to your research topic. Derive at least one specific testable hypothesis. Be sure your hypothesis reflects a specific relationship between two variables.

13.5 Types of Data Used in Social Research

Before moving on to the various methods used in social research, let us understand the kinds of data that are used in social research. One is primary data, which are collected by the researcher himself/herself. The other is secondary data, which are collected from sources such as libraries, etc. When the data mainly deal with numbers and tables and require statistical analysis they are called quantitative data whereas if the data are descriptive and require sociological/anthropological analysis they are called the qualitative data.

Let us now begin with the discussion of prevailing methods of social research.

13.6 Research Methods

We have already discussed the meaning of the term method and distinguished it from methodology. This should allow you to remain sensitive to a different connotation of the term 'method'. You may come across the term in the sense of its epistemological reference and you may also come across the term in the context of its use as a tool of research. Our discussion of the following methods refers to both shades of meaning

but it is more in the context of their uses as tools in research. Their discussion pertains to both the ways of collecting and analysing data. You may also note that methods specifically relating to quantitative and qualitative procedures (sampling, survey, intensive fieldwork, participant observation and case-study etc) will be elaborated at length in Block 5 and Block 6 of Book 2 and Block 7 of Book 3. Therefore, they have not been included here for our general discussion of research methods.

Evolutionary method

We have learnt while understanding the emergence of empiricism in social research that the earlier social scientists emulated the biological model in the study of society. Darwin's theory of evolution found parallels in the social sciences. It was presumed that societies go through the stages of transformation from simple to complex forms. Each change by itself results in minor modifications in the phenomenon but the cumulative effect of changes over a long period is the emergence of new, usually more complex, forms. It studies the cumulative effect of a series of changes by analysing how each change brings modification.


Charles Darwin
(1809-1882)

Several sociologists opposed this method and called the method a tool to build historical descriptions, which sounded artificial and superficial. But at the same time one comes to know systematically about the altered conditions of an institution through a long period of time. The method allows a study of social change.

Comparative method

This is the oldest method in the social sciences used to generate and analyse both kinds of data, secondary and primary. Positivists like Auguste Comte (1830-1892) called it a reliable and scientific method of inquiry. The evolutionists and diffusionists used it to explain the similarity of cultural traits and the 'progress' of societies. It was a simple exercise to break up cultural wholes into traits and compare them to evolve theories of diffusion and evolution. Franz Boas (1940) who vehemently criticised the 'armchair' theorists and came up with the idea of cultural relativism, which accepts each culture as a unique entity and rejects the idea of comparison of traits across cultures. Boas emphasised the relevance of historical data

Franz Boas
(1858-1942)

and propounded the idea of studying cultures in the historical context. This led to the emergence of cross-cultural studies and attempts were
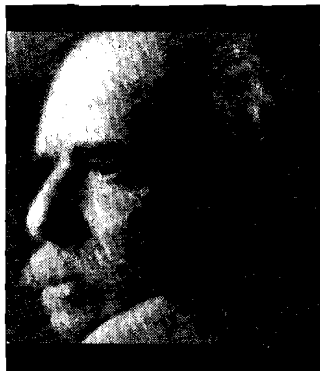
made to analyse the universal categories in each culture like kinship, family marriage, religion, etc to understand the similarities of human societies all over the world. Cross-cultural comparisons are the basis of the structuralism in anthropology, especially of Levi-Strauss (1963).

Boas (1940) pointed out the limitations of the comparative method. He recommended a modified use of comparison within a small well-defined geographical area. He called this method 'historical method'.

G.P. Murdock (1940) uses statistical techniques to give a new dimension to his comparison but he prefers to call it a cross-cultural survey. According to him, in order to understand what precisely the comparative method should be, we must bear in mind the kind of problems to the solution of which it is directed. These are of two kinds, which we can distinguish as synchronic and diachronic[@]. In synchronic study, we are concerned only with a culture as it is at any given moment of its history. The ultimate aim may be to define as precisely as possible the conditions to which any culture must conform if it is to exist at all. We are concerned with the nature of culture and of social life along with the discovery of what is universal beneath the multitudinous differences that our data present. Hence we need to compare as many and as diverse types of culture as we possibly can.

G P Murdock
(1897-1985)

In a diachronic study of culture, on the other hand, we are concerned with the ways in which culture changes, and seek to discover the general laws of the process of change. To study how the culture changes, we have to first determine what culture really is and how it works.

Thus, the study of synchronic problems must necessarily to some extent precede the study of diachronic problems. Fred Eggan (1954) states his own preference for the utilisation of the comparative method on a smaller scale and with as much control over the frame of comparison as possible. Firstly, it is natural to utilise regions of relatively homogenous culture or work within social or cultural types and further to control the ecological factors in so far as it is possible to do so. Secondly, it is important to control the historical framework within which comparison takes place. Eggan (1954) suggests the method of controlled comparison. Oscar Lewis (1955), on the other hand, holds that there are only comparisons in anthropology and no comparative method.

Oscar Lewis
(1914-1970)

With time, the comparative method has undergone a tremendous change. Earlier scholars used this method to arrive at general laws about society. But soon the realisation dawned that arriving at general laws was not possible because of the complexity and diversity of social phenomena across societies. By 1960 onwards the main aim of comparative method shifted from the formulation of universally valid generalisations to the production of accounts of specific cultures. This emphasis on ethnographic specificity has produced data which is qualitatively different from that produced by earlier studies.

The cross-cultural studies fall into two categories: (i) Idiographic studies, which focus on particularistic details located in time and space and (ii) nomothetic studies that focus on law-like generalisations.

Let us now discus the historical method.

Historical method

This method recognises the uniqueness and dynamic nature of societies and cultures. The historical information pertaining to an entity (which could be a society, an institution or any phenomenon) reveals a great deal about the nature of its social dynamism. The data that doesn't take historical dimension into account gives the impression of timelessness.

The historical method collects facts by going to the past in different periods. The sources of information include written records, newspapers, diaries, letters, travellers' accounts, etc. Social researchers generally confine themselves to three major sources of historical information.

a)   Documents and various historical sources to which historians have access

b)   Materials of cultural history and of analytical history and

c)   Personal sources of authentic observers and witnesses.

When, how and under what circumstances to use any or all these sources depends upon the discretion of researchers' interests, scope of their studies, and availability of sources. You can make direct use of documents when historians have not analysed the events that they depict and others have not yet incorporated them into the writings of the broader cultural historical settings. You can also use them to supply a missing link in our knowledge of a particular social situation.

When historical documents depict events not of generations but of centuries past, it is generally useful for social researchers to utilise the existing secondary data, which may be interpretations or analyses of history. But there are some of the following limitations to this method.

a)   Historians cannot write history life-size.

b)   Not all happenings in time and space can be known at the time of writing.

c)   Personal biases and subjective interpretations enter unconsciously.

At the same time historical data may be regarded as reliable

and adequate for social research

a)   When you present historical documents as complexes of social
      forces.

b)   When social phenomena meaningfully depict intricate social
      processes and sets of inter-relationships (psychological, economic,
      educational, cultural, religious) contribute to a unified whole, a
      configuration or complex pattern.

Moreover the documents which you may study, may be personal documents
like biographies, diaries, letters, and memoirs or may be public documents
like magazines and newspapers, and other published data.

Let us complete Reflection and Action 13.3.

> **Reflection and Action 13.3**
> After going through the three research methods discussed in Section 13.6 of
> Unit 13, why a sociologist (or a social scientist) would use an evolutionary skilled
> method, a comparative method, and an historical method. Select a research
> topic and show how this topic would be addressed in terms of each of the three
> methods of research.

Personal documents
These include all the published and unpublished information documented
by individuals for different purposes. Personal documents are not written
in a scientific style. They generally represent some ideas, values and
feelings, etc. In spite of being subjective and unscientific, personal
documents have been of value in social research. They provide information
about contemporary social circumstances, systems, customs, ways of
life, etc. You may come across the following types of personal documents.

Biographies: Some great political leaders, social reformers and eminent
persons write their autobiographies. These provide useful information
concerning social, political, religious and cultural conditions, and the
incidents of their time. Whatever the type of information biographies
provide a few valid and reliable pieces of information. However, the
authors might have tried to exaggerate or underrate incidents and their
feelings intentionally. They may have deliberately concealed facts, which
may show their personality in a favourable or unfavourable perspectives.

Diaries: Diaries are written with different intentions. Some persons
write diaries to remember important incidents of their life. Some others
review their life. Others review their life from time to time and not in
diaries.

The information contained in a diary could be very useful in social research.
Diaries are used as a technique of sociological research mainly in literate
societies where it is not always possible to closely observe interaction.
You may urge your respondents to write their interactions in diaries.
For example, Cubitt (1973) used this technique on a sample of couples

for a period of one week and found that diaries generated useful data but not many respondents were willing to write diaries for not more than a week.

Most diary writers have no intention to publish them. Generally it is expected that information recorded in a diary will be reliable. Certain limitations of diaries are

a) As diary writing is mainly personal, therefore it does not include detailed and complete description of incidents but information in a sketchy and rudimentary form. As a rule, a diary does not record the context in which an incident has taken place. This makes it difficult to interpret incidents and understand their real meaning.

b) Diaries are written irregularly and thus lack connection in information. It is very difficult to connect different incidents and feelings described in them.

Letters: Letters are the medium of expression of feelings, likes and dislikes, plans, attitudes, desires, emotions, ambitions, and also important incidents of life. They tell about interrelationships such as friendship, love and marital affairs, tensions, etc. Some notable limitations of letters are:

a) It is difficult to collect private letters.

b) Letters do not provide detailed and complete description of incidents.

Memoirs: Some persons are interested in writing memoirs of their travels, excavations, explorations etc. Such memoirs provide useful information in social research.

Public or Official Documents
You may collect public documents of the following types from some government or non-government institution.

Records – Most government and non-government departments preserve so many types of records consisting of important information and are important sources of information for social research.

Published data- You may find several sources of this kind of data, for instance periodical surveys concerning population, rate of mortality, birth rate, marriage and divorce. Such published documents are very useful.

Journals and Magazines - These are important public documents including information on various aspects, which can be utilized in social research. This source of information is quite reliable.

Newspapers – The published news, discussions on contemporary issues, report of meetings, and conferences, essays and articles, letters to editors are good sources of information and have a good deal of reliability.

The collection of primary data in empirical situation involves one of the

two kinds of methods depending on the nature of data required. These are Survey method and Fieldwork method. As noted earlier, we will discuss these methods in detail in other blocks of MSO 002.

13.7 Conclusion

Unit 13 has provided the prospective researcher an elementary introduction to methods commonly used in social research. Research is needed almost everywhere and therefore it is a good idea to learn research methods, which help us appreciate how we come to know what we take to be facts. Someone somewhere makes a study and offers the world his or her findings on the subject of research. For accuracy, reliability and better usability of your research you would employ scientific methods. We have discussed elements of methodology that provide us with an overall frame for conducting research and selecting appropriate tools for going through the research procedure. We discussed some of the commonly employed social research methods while for other methods we will go to units in Block 5 and Block 6 of Book 2 and in Block 7 of Book 3 of MSO 02.

Further Reading

Allen G and G. Skinner 1991. *Handbook for Research Students in Social Sciences.* Falmer Press: London

Babbie, E. 1989. *The Practice of Social Research.* Wadsworth Publishing Company: Belmont, California

Unit 14
Elements of Research Design

Contents

14.1 Introduction

14.2 Structuring the Research Process

14.3 Conclusion

Learning Objectives

It is expected that after reading Unit 14, you would be able to prepare a research design of your own mini research project, which would include the following details.

❖ The research problem that you have decided to work on

❖ The choice of the field site where you would carry out your research

❖ The estimated time and cost of the research

❖ Review of already published material relating to your research topic

❖ The hypothesis or hypotheses you have set out to test

❖ Theoretical orientation of your research

❖ The universe and unit of study of the research and methods of data collection

❖ Interpreting the data and writing the research findings.

14.1 Introduction

Research design is a kind of blueprint that you prepare before actually carrying out research. It is a systematically prepared outline stating the manner in which you plan to carry out your research. You may like to contemplate your research in terms of two facets, namely the empirical facet and the analytical facet. The two facets remain in your mind together while in practical terms you may plan your research in terms of a phase of data collection and another phase of analysing the data. Theoretical orientation and conceptual models in your mind help you decide the kind of data you would collect and to some extent also how you would collect them. Later, while analysing your data, again your theoretical and conceptual understanding of social reality in general will guide you to classify the data and to recognise the pattern in order to explain and present your findings.

Research is an ongoing process consisting of a series of steps, beginning with your identifying various concepts related to your research theme. Once begun, it continues through a set of regulated steps to its conclusion. Unit 14 is about the steps that you state in your research design. We are going to discuss each of the ten broad steps that generally constitute the basic elements of sociological researches. For your assignment of carrying out a mini research project, you may prepare a research design

14.2 Structuring the Research Process

The structuring of the research process is an essential part of science. However this does not mean that these steps are always in a sequence. In fact, the various phases of research overlap. At times the first step determines the nature of the last step . The steps involved are not mutually exclusive, nor they are separate and distinct. Figure 14.1depicts the broad steps researchers usually take in the process.
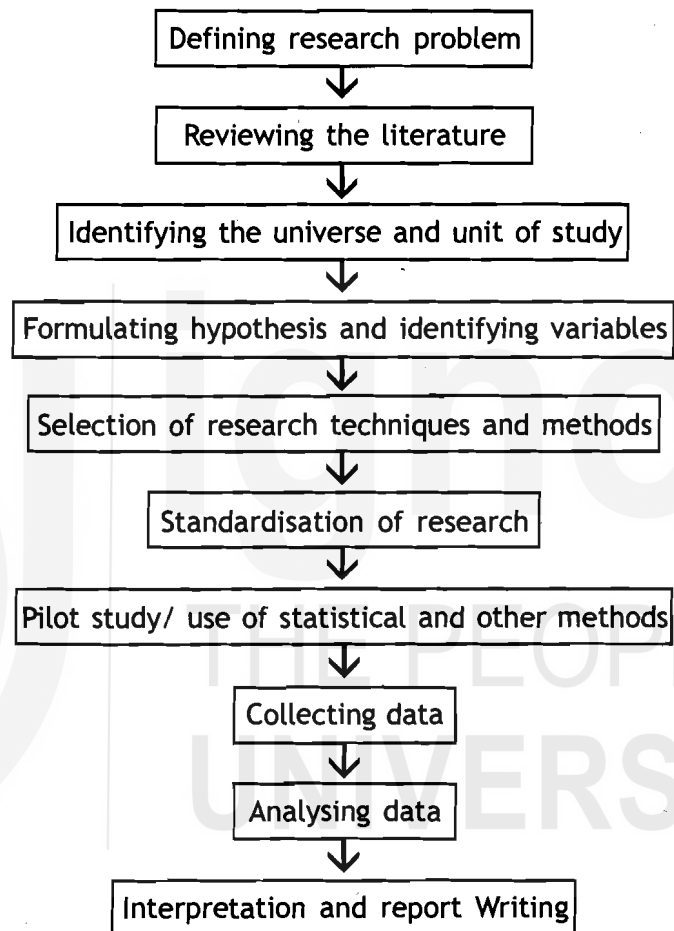
```
Defining research problem
          ↓
Reviewing the literature
          ↓
Identifying the universe and unit of study
          ↓
Formulating hypothesis and identifying variables
          ↓
Selection of research techniques and methods
          ↓
Standardisation of research
          ↓
Pilot study/ use of statistical and other methods
          ↓
Collecting data
          ↓
Analysing data
          ↓
Interpretation and report Writing
```

Figure 14.1 Ten Steps in Research Design

Research design is the strategic plan of the project that sets out the broad structure of the research. See Box 14.1 for a brief mention of functions and purposes of preparing a research design.

Box 14.1 Function and Purpose of Research Design

Black and Champion (1976: 76-77) have pointed out the following three functions of research design.

❖ A research design provides a blueprint for operationalising the research activity.

❖ It defines the limit and scope of the research.

❖ It provides an opportunity to the researcher to foresee possible areas of problems in the process carrying out the research.

Manheim (1977: 142) identified the following five purposes of preparing a research design.

- ❖ To gather sufficient evidence to support one's hypothesis and to disprove alternative hypotheses.
- ❖ To carry out a research that can be repeated in terms of its subject matter and research procedure. In other words, it does not pertain only to unique situation that has no relevance to society at large.
- ❖ To be able to work out correlations among variables in a manner that produces interrelated propositions.
- ❖ To make out the need for a pilot study in order to carry out the future plans of a full-fledged research project.
- ❖ To be able to economise on time and resources by selecting appropriate techniques of data collection.

A highly standardised quantitative research strictly follows the research design while qualitative research is flexible and amendments to the design are possible. Nevertheless, it is always a good idea to formulate a research design. A research design needs to take into account the following considerations, which entail all the steps mentioned in Figure 14.1.

Defining your research problem

In the research process, the first step is to select and clearly define the problem to be researched. You need to find the problem and formulate it so that it can be subjected to research. A research problem in general refers to some enquiry, which a researcher undertakes in the context of either a theoretical or practical situation and wants to obtain an explanation of the same.

The formulation of a general topic into specific research problems constitutes the first step in a scientific inquiry. Essentially two steps are involved in formulating the research problems, that is, understanding the problems thoroughly and rephrasing it into meaningful terms from the analytical point of view. You need to select the subject that is familiar and feasible so that research material or sources of research are within your reach. It is better to select the research problem before a preliminary study of the existing literature. Formulating or defining a research problem is an important step in the research process and a clearly stated problem is research half done.

You need to clearly state the research questions in the light of the topic of research and the theoretical foundations on which it rests. Next, you need to spell out the aims and objectives as per the requirements of your research questions. This gives the research process a well-defined focus and direction. Unless one has a clear idea of the objectives, the course of the research will not be smooth and the data will not have the desired consistency because it is possible for you to approach a topic from the viewpoint of different perspectives, each addressing a different set of issues. For instance, research on the sociology of development can have many research questions like women's role in development, the role of caste and kinship in development, or social consequences of

development on family and community life of people. While preparing a research design, demarcate the focus of research by jotting down the outline and features of the topic and the aims and objectives of research.

Choice of field site(s)

Embarking on a research, give as much emphasis to the area of research as the topic. To some extent, the choice of the area determines the success of your research. The relevance of a research topic depends on its usefulness to the problems of the area either in terms of a practical purpose or obtaining a theoretical understanding of the epistemological issues. For instance, a study on communal relations cannot be carried out in a tribal village. In such a study, you would need to observe the interaction between different religious groups and therefore you would choose an area inhabited by people of several religious communities. It is desirable to have two or three sub-areas in mind within the broad area. For instance, sometimes you may encounter some unforeseen and unmanageable problems at the district level or the village level and then you would need to find an alternative to fall back upon. You should first spell out your choice of field site(s) and then start gathering information on it. This would help you gain an understanding of the geographical and socio-political conditions of the area, which would have a bearing on the collection of data. This would help you frame your research strategies and questions in a manner suited to the area and its people.

Consideration of time and resources

You need to be fully aware of the limits of your resources and also clearly define the time frame while designing your research. Unless you draw up a schedule of the different steps of your research, it is likely to become a long drawn process, which is bad for both quality and relevance. Imagine researches on cholera epidemics taking years to complete. The delay would mean poor quality research and an unchecked death rate. We also know that unless you get liberal time your research would fail because you cannot subject social reality to overnight machine tests in the laboratory to obtain quick results. You need to evaluate the time requirement in a realistic manner and plan the strategy accordingly. Careful planning and sticking to a time schedule will help you use your resources effectively and complete the research in time. Besides, you should be aware of the limitations of your resources and plan the strategy in a realistic and cost effective manner. If the resources are exhausted midway, it will be a severe blow to research. If an agency is funding the research, your credibility is at stake. Hence, you need to clearly state in your research design the time and resources that you have for research.

You need also to foresee and note down the effects of your resource constraints on the research process. After identifying the effects you would develop strategies to counter those you can possibly do. The account of those, which cannot be managed, will help future researchers to be familiar with them and deal with them in their projects.

Reviewing secondary material

The purpose of reviewing the existing literature on your research theme is to help you assess the feasibility of the project but also to formulate an effective methodology. You would need to consult academic journals, conference proceedings, government reports, books, etc (see Box 14.2).

Box 14.2 The Use of Computer in Literature Searching

For the purpsoe of making use of the Internet facilities to search related literature, you need to read Unit 32 in Block 8 of Book 3. If your research topic is precisely defined, the search can be a very fast and efficient way of obtaining relevant references in a number of bibliographic tools.

You may review two types of literature, literature concerning the concepts and theories, and the empirical literature consisting of studies made earlier. You may come across even such studies that contain both theoretical as well as substantive aspects of your research. The outcome of the review will be that you will know about available data and other materials on the theme of your research. A more sophisticated and clearer statement of specific research questions is likely to emerge after the literature review.

When researchers prepare a research design they draw an outline of the entire research process. They need to have a clear picture of the nature of data that would help tackle the research questions. For instance, researchers decide in advance how many case studies would help them draw meaningful conclusions or the number of life histories that they need to collect and of which categories of persons. A lot of hard work and insightful thinking goes into the process. Researchers review the past studies on their topics and work upon their research questions to arrive at a realistic research design.

Scheduling the time and events to observe in the field forms an important component of your research design. This provides you a sense of direction while collecting data. This does not imply that you have to strictly follow your schedule regardless of the situation in the field. The actual field conditions do guide you and correspondingly your research design may face unanticipated changes. Yet, you cannot just land up in the field unprepared and bewildered and hence you need to plan out the various stages and strategies of research. At the same time you have to be ready to make adjustments according to the field exigencies.

Hypothesis

After extensive literature survey, you need to state in clear terms the working hypothesis or hypotheses. The hypothesis is a tentative assumption made in order to test its logical or empirical consequences. You may define a hypothesis as a proposition or a set of propositions set forth as an explanation for the occurrence of some specified phenomena either asserted merely as a provisional conjecture to guide some

investigation or accepted as highly probable in the light of established facts. A hypothesis may seem contrary to the real situation. It may prove to be correct or incorrect. In any event, it leads to an empirical test. Your hypothesis needs to be clear and precise and capable of being tested. It is to be limited in scope and consistent with known or established facts and should be amenable to testing within the stipulated time. It needs to explain what it claims to explain and should have empirical reference.

A hypothesis may have variables and it may be looking for the nature of the relationship between the variables. The variables are empirical properties that take two or more values. For the purpose of research, you need to make a distinction between dependent and independent variables. The variables that you wish to explain are regarded as dependent variables (or criterion variables). The other variable expected to explain the change in the dependent variable is referred to as an independent variable (or predictor variable). The dependent variable is the expected outcome of the independent variable and independent variables produce dependent variables.

Variables can have three types of relationships among them. A positive relationship is one where an increase in one variable leads to an increase in the other. A negative relationship is one where an increase in one variable leads to a decrease in the other. Finally, a zero relationship is one which shows no significant relationship between two variables. Such a distinction between dependent and independent variables is analytical and relates only to the research purpose.

It needs to be mentioned that the formulation of hypothesis is not always a part of the research process. You may carry out exploratory research when you do not have sufficient knowledge of the situation to prepare a hypothesis.

Theoretical orientation

Your research design needs to clearly spell out the data collection methods to be employed. Your methodological and philosophical orientations govern your choice of methods. Your research design would elucidate the methodological and theoretical basis of research and help you identify appropriate methods and techniques of data collection. For instance, if you have positivistic orientation, you would rely on observational method because for you social reality would be an observable entity. On the other hand if you adopt a phenomenological model, you would employ various kinds of interviews to unravel the logico-mathematical model of culture. A researcher conforming to the post-modernist approach would view social reality as multidimensional and record multiple voices and interpretations. An action research with limited time resources would employ triangulation[©] (comprising multiple methods and multiple investigators), and focus group discussions. You have to carefully choose from the vast repertoire of sociological/ anthropological methods, the

ones that suit your research purpose most.

Universe and unit of study

Before starting with data collection you have to identify the universe and the unit of study. The identification of universe implies demarcation of the physical area and social unit of study. The universe consists of the population within a well-defined area where the study is to be conducted. However, such a group is usually too large and not possible to be covered by a single investigator. Therefore, a smaller and more manageable group may be selected by sampling. The outlines of the universe and its attributes may be delineated more clearly by a taking a census and then making the choice of the group(s) to work on. Within the broad universe further specification of the possible units that could be studied makes up the actual or effective universe. The group(s) selected as focus of study is called the unit of study.

Pilot study

The pilot study is the leading study in your research area. The pilot study leads the researcher to the full-length investigation depending on the size of the population and the amount of time. In other words, a pilot study is an exploratory study done before the actual work starts in the field. It is a pre-testing of your research methods and techniques in order to perfect them. Pilot study will ensure that right questions have been put in the questionnaires for making the fieldwork fruitful. It makes you aware of the difficulties beforehand and provides you an opportunity of modifying your techniques to suit field conditions. Pilot study depends upon the size of the population, the time available and the availability of funds.

Sampling

A universe is often too large for an individual to work upon. A sample is the smaller representation of a larger whole. Sampling allows the researcher to work scientifically and saves time. Analysing large quantities of material is wasteful and an intensive analysis of fewer cases is economical. You need to be cautious and careful while sampling. As explained earlier, the universe refers to a defined population size. Such a universe may be further divided depending on the specifications required. This is known as stature or subpopulation. A stature is a divisible category which depends upon the kind of problem in which one is interested. A sampling frame includes all the elements of a population from which the sample is drawn. The determination of an error while sampling, statistically or qualitatively is known as sampling error. The sample must be a true representative of the universe, as well as being adequate in size (for different kinds of sampling see Units in Blocks 5 and 6 of Book 2).

Data collection

After obtaining some idea and understanding your field and working out your methods and techniques of data collection, you may plan how to

access the field. Quite often social research requires the study of the 'other' community and researchers need to make extensive preparations to gain entry into the society under study. One needs to plan who would facilitate access and how one would contact such persons.

It is also possible to study one's own society. Some scholars (for example see Madan 1975) may not adhere to the idea of studying the 'other' community only. In Box 14.3 we bring you an excerpt from Madan (2004: 203), who 'questioned the requirement of the personal study of an alien culture on the part of every anthropologist'.

Box 14.3 On Studying One's Own Community

Instead, I emphasised the importance of bridging the gap, or conversely, creating it, between the observer and the observed. I described fieldwork as the feat of 'living intimately with strangers' (Madan 1975). I might have added: 'or strangely with intimates', which was what I had done during my fieldwork among the Pandits of rural Kashmir. The anthropologist studying his own culture I wrote, 'is an insider who takes up the posture of an outsider, by virtue of his training as an anthropologist or a sociologist, and looks at his own culture, hoping to be surprised. If he is, only then may he achieve new understandings' (Madan 1975: 149)

In addition to the question of studying the 'other' or your own community, you need to be clear in mind whether you wish to keep the purpose of research overt or covert. While in covert research, the research remains disguised and the researcher does not bother about convincing the informants, the overt research implies the challenge of convincing the respondents and winning over their trust. You have to adopt a meaningful role in the society under study and be careful about the sensitivities of your informants. Although the access and role of the researcher are negotiated and renegotiated in the field according to the circumstances, thoughtful planning gives you an edge to start the research process with adequate preparation. This is important because firstly, if you identify the right contact persons or the 'gatekeepers' (the prominent persons of the community who have power to grant or deny access to the field) beforehand your entry to the field would not be time consuming and cumbersome. Prior interaction with the 'gatekeepers' would also help you adopt a suitable role in the field. Secondly, if you are already convinced whether to keep your research purpose overt or covert, you can effectively negotiate your access to the field.

There are several ways of collecting your data. Primary data are those, which you as the researcher collect yourself. You consult secondary data from reference sources like the library etc.

Primary data can be collected either through experiment or through survey. There are two main techniques of data collection, namely, intensive fieldwork methods and survey methods. Intensive fieldwork methods include observation, interview, case study, genealogy etc. You

can use one or more methods to collect the data, taking into consideration the nature of investigation, objectives and scope of inquiry, financial resources and time available and degree of accuracy. The data to be collected would need to be adequate and dependable.

Analysis and report writing

After data collection, you would turn to their analysis. Analysis requires a number of closely related operations such as establishing categories and their application to raw data through coding, tabulation so that you can draw statistical inferences. For coding and tabulation of coded symbols, you need to carefully read the units in Blocks 5 and 6 of Book 2 and Blocks 7 and 8 of Book 3. Tabulation is a part of the technical procedure wherein you are able to put your classified data in the form of tables (see Box 14.4).

Box 14.4 Classifying and Coding the Data

Classifications facilitate rapid, accurate and comprehensive searches of stored field material, but a poor classification or careless retrieval may be wrose than having none at all. In connection with this, particular attention should be paid to classifications which separate data which are otherwise related. For example, if "name-giving ceremonies" are indexed only under RITUAL, a search intended to assemble all data on KINSHIP may fall short of the mark.

Notes must, in the first instance, be coded so that they can be subsequently located in a mass of material. You will probably wish to refer back to earlier notes quite frequently in the field, to check up on certain matters and test informal hypotheses. At the very least, all sheets should be numbered sequentially.

You need to clearly delineate the form of analysis you wish to eventually adopt. Although often the nature of data collected by you determines the nature of analysis, yet at the stage of opting for certain methods of data collection you would have some idea of the analytical tools you are likely to employ. If you plan to adopt certain computer packages you would need to collect data keeping that in mind. While analysis may depend on the nature of data, you need to be careful to avoid the reverse situation, that is, the pre-determined mode of analysis solely determines the methods of data collection. You may face getting a one-sided picture of the social reality if you were to adopt computer-based methods only, because computer packages offer analysis of a particular dimensions of reality while social research requires as broad a picture of reality as possible. You would be better off collecting data covering as many dimensions of reality as possible. In any case, you need to be quite clear about the mode of analysis to employ to interpret the data collected. Your research design is meant to reflect your theoretical orientation. In this way, you are actually planning every stage of research, from identifying the topic of research and method of data collection to report writing.

Your research design would be complete if you spell out the manner in

which you would present the results of the research. It is an equally important step because you would need to keep in mind the ethics of representation, especially if the research deals with sensitive issues. While you seek to unravel social reality, you cannot play with the privacy of the people who are more than just the subjects of research. It is your responsibility to do justice both to the research and to the people. There is a practice of presenting data with pseudonyms[©] and modification of identities, events and location. You need to always elucidate in your research design the manner in which you would report the results. Presentation of research findings for publication implies their distribution among the public, including those you studied. This is the point when you achieve the aim of making a contribution to the general body of literature related to the subject of your research.

14.3 Conclusion

Unit 14 has enumerated the various steps for undertaking a sociological research with the aim of preparing you to carry out one such research. This will be a practical exercise for you to complet as a compulsory requirement of completing MSO 002. You will need to prepare a research design before actually carrying out your mini research project. The Reflection and Action exercise for Unit 14 is that you prepare a research design for your proposed research. You may of course modify it as you come to learn in more detail about the various steps needed in the research process.

Reflection and Action 14.1

Prepare a research design of your proposed research after selecting (tentatively) a topic of your interest. The research design needs to incorporate all the steps shown in Figure 14 1.

Further Reading 📚

Singleton, Jr Royce A. and Bruce C. Straits 1999. *Approaches to Social Research*. Oxford University Press: New York

Sarantakos, S.1998 (first published in 1993). *Social Research*. Macmillan: London