

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

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 phenomenon 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.

Reflection and Action 12.2

Identify the type of research carried out on voting forecast on the basis of a survey conducted by different organisations and TV channels.

What type is the research of a social anthropologist who provides an account of the culture of a tribal society?

Select any two studies as examples of analytical research from those mentioned in the units of Book 1 of MSO 002. Write on a separate sheet of paper answers of the above questions and also for each study the name of the author, title of the book and year, place of publication along with the name of the publishing agency.

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 investigate 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 correlation. The correlation 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