

BLOCK 2
**RESEARCH METHODS IN RURAL
DEVELOPMENT**

THE PEOPLE'S
UNIVERSITY

BLOCK 2 RESEARCH METHODS IN RURAL DEVELOPMENT

Introduction

Block 2 will introduce the foundational research tools in rural development. this block's lessons have been chosen with care to introduce you to a variety of research methods used in empirical inquiry. you will learn about social research methods, descriptive and experimental research, evaluation and action research, research, inquiry survey and case study in particular during this block.

Unit 5, 'Methods of Social Research', talks about exploratory research which primarily relies on induction and observation. The empiricist employs a wide range of research techniques, including participant and non-participant observation, formal interviews, structured, semi-structured, unstructured, and in-depth interviews, document analysis, media analysis, archive searching, analysis of official statistics, and reviews of published data. Additionally, he/she employs a wide range of analytical methodologies, including structuralist deconstruction, action research, multivariate analysis, and semiological analysis. Critical inquiry and phenomenology are two important contemporary developments in methodology. Numerous positivist presumptions are rejected by phenomenological viewpoints in social science. They contend that there are fundamental differences between the subjects covered by social and scientific sciences. Through in-depth examination of social processes, critical research probes beneath the surface of extensive appearances. Critical analysis is done of the ideas that frame and characterise an area of inquiry. The relationship between particular phenomena and larger social systems as well as their historical forms are analysed.

Unit 6, 'Descriptive and Experimental Research' talks about two significant research methodologies, the descriptive technique and the experimental method. The description, recording, analysis, and interpretation of existing conditions are all part of descriptive research, which explains what the condition is. A variety of descriptive research methods, including survey, documentary analysis, correlational, and causal comparison studies, were also investigated. An experimental study predicts the results of carefully regulating or manipulating a variety of variables.

Unit 7, 'Evaluation and Action Research' looked at two crucial types of research: action research and evaluation research. An evaluation study offers an unbiased evaluation of the programme and services. The utility of social interventions and human service programmes is to be evaluated. Research designs, methodologies, and procedures are used in evaluation to organise social intervention programmes, supervise their execution, and assess how well they accomplish their objectives. Through deliberate intervention, action research seeks to address real-world issues that affect a person, a group, or an

organisation. Here, the focus is on adopting alternative techniques as a means of problem-solving.

Unit 8, 'Research, Inquiry Survey and Case Study' covered case study, survey, and research inquiry methodologies. The unit has concentrated on the purpose and importance of these methodologies, as well as the features and procedures involved in doing research. Investigative research focuses on discovering existent but unidentified facts. A wider understanding of the phenomenon is the goal of the survey approach. It is longitudinal and has a spatial focus. The purpose of the case study method is to gain a deeper understanding of a situation. It emphasises time. It has a longitudinal nature. A well-structured case study can inspire additional research questions. The survey and case study methods of research inquiry complement one another since new research can be done using the information gathered using both methods.





UNIT 5 METHODS OF SOCIAL RESEARCH

Structure

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5.0 INTRODUCTION

Social research pertains to the study of issues related to the diverse social aspects of the society. The diverse social issues are studied by diverse social science disciplines which have influenced social science research by their contribution, theorization and the methods adopted in the process of the pursuit of knowledge. The researches in diverse fields have provided various conceptual categories, various research practices and analytical frameworks.

Social research in rural development is guided by the contributions made by different disciplines. It is also guided by the empirical methods used in different areas to collect information regarding matters concerning social issues. In trying to seek information and explanations for what is observed, most scientists usually make use the method of positivistic assumptions and perspectives. However, the phenomenology challenges these assumptions and concentrates primarily on experimental reality and its descriptions rather than on casual explanations.

In phenomenological and critical research, the researcher is prepared to abandon the positivistic lines of thought. They raise a constant questioning of the perspective. This unit presents a brief account of empirical, phenomenological and critical paradigms of social research.

5.1 OBJECTIVES

On the completion of this unit you should be able to:

- describe process of empirical research,
- explain the meaning of phenomenology and differentiate it from positivism,
- explain the phenomenological approaches in social science research,
- understand the functions of critical paradigm, and
- describe the elements and approaches of critical social research.

5.2 EMPIRICISM

An empiricist is one who practices empiricism which disapproves all *a priori* knowledge and rests solely on experience and induction. The empiricists give emphasis on induction and use of direct observation of facts to confirm ideas and form theories or explanations of how the natural phenomenon works.

Social life is relatively complex. Its basic character is flow and flux. Its concrete ingredients are people and their behavior which form substance for observation. The social scientist working in any field is well aware of the complex nature of human beings as subjects of their enquiry.

The problem of study of a complex nature of the subjects is more for an alien observer than for the native observer because the outsider is not socialized into the nature milieu as insider. The outsider observer is not rooted in the situation under empirical observation. The empiricist gives greater focus on observation-oriented investigation.

5.2.1 Empirical Enquiry

The empirical scientific research is essentially a way of looking at observable empirical facts. It is a process of approaching the empirical world. Science consists of theory and facts. A fact is an empirically verifiable observation and a theory tries to find the relationship between facts. The facts of science are the product of observations.

The theory construction is an important objective of empirical research. Theory usually gives orientation to empirical research. Theory guides the collection of relevant data and offers a conceptual scheme to bind them together in a more systematic manner. Theories represent an improvement in our knowledge. They also help us to predict facts. In a way, facts help to initiate theories and to test the validity of existing theories. They clarify and redefine theory. Theories and facts stimulate each other and contribute to the growth of empirical knowledge.

Empirical studies include the whole gamut of research tools: observation – both participant and non-participant, formal interviews, semi-structured and

unstructured and in-depth interviews, analysis of personal and institutional documents and published literatures, questionnaire-both structured and unstructured. In addition to such tools, empirical studies also use a wide variety of analytical techniques like ethnographic interpretation, historical reconstruction, action research, multivariate analysis, semiological analysis, etc.

5.2.2 Empirical Research Process

Empirical research is a process of discovery of truth. It aims at a systematic collection and interpretation of facts. It involves logical and objective procedure. In empirical research, investigation proceeds in a systematic and orderly manner.

Empirical research consists of the following steps: (1) collection of data, (2) classification and tabulation of data, (3) analysis and interpretation of data

Empirical research is characterized by systematic observation, use of conceptual categories, objective analysis, verifiability, predictability and systematic interpretation. Let us briefly explain these characteristics of empirical research.

Systematic observation in empirical research

Empirical research relies on systematic observation of facts in order to explain them and understand them. The empirical observation is not casual. It is a conscious and deliberate activity. It is aided by certain devices which enhance accuracy and precision to scientific observations. Empirical observation is guided by a hunch or a general idea as to what is to be observed. The collection of facts through observation is important for verifying empirical theories, modifying or improving them and making new theoretical generalization.

1) Use of concepts in empirical research

Concepts are the building blocks of empirical research. A theory consists of several inter-related concepts. Concepts are fundamental to all human communication and thought. Clear conceptual clarity is basic to scientific research. The concepts have to be defined with precision.

The precision in defining concepts fosters clear thinking. The clarity of conceptual categories being used is important because the entire empirical research is based on those categories.

2) Objectivity in empirical research

Objectivity means that the conclusions we reach in empirical research are not affected by our personal views or values. It means that similar or same conclusions can be reached by any person who repeats the same set of observations. It permits the repetition of observations under practically identical conditions. This facilitates not only objectivity but also verification of facts.

3) Verifiability in empirical research

Any finding is said to be empirically objective only if it can be verified. If a theory involves things which cannot be verified, the theory tends to be metaphysical rather than scientific. The empirical conclusions are liable for verification at any time. Since the empirical situation undergoes change, the scientific conclusions are never final, they are: tentative and provisional.

4) Predictability in empirical research

Empirical researches involve prediction. Precise predictions constitute one of the important components of the empirical research. Predictability usually depends upon two things: (1) the nature of the phenomena themselves and (2) our knowledge of the causes of the phenomena. If the number of causes is more, prediction becomes more and more difficult. Prediction depends, to a large extent on our ability to arrive at exact prediction. It also depends upon accurate measurement. All predictions are fundamentally uncertain. We can say that social science predictions as well as predictions in physical sciences tend to be probabilistic. However, it is true that predictions in social sciences usually have a lower probability of success than those in physical sciences.

5) Systematic Interpretation

Empirical investigation is systematic in many ways. It is thorough and rigorous, as it makes use of designs to guard against errors which may creep in at the time of collection of data as well as at the time of interpretation and drawing generalizations from the data. Empirical investigation encourages a systematic report on the methods used to collect data, the hypothesis formulated, the techniques used for analysis and the logic applied for making generalizations. It is because of the tight investigation and reporting that the researchers can early find flaws that may enter at any stage of investigation. It is in this sense that empirical investigation is a self-correcting process.

Further, the empirical investigation is systematic because it aims at arriving at a set of propositions that are consistent with one another. The systematic nature of empirical investigations distinguishes the scientific attitude and temperament from non-scientific attitudes and temperaments. Sometimes, people may reach the right conclusions, but that does not make the statements scientific unless they follow from the right premises. It is the overall procedure followed that sets the empirical scientific investigations and conclusions meaningful.

Check Your Progress 1

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

- 1) Briefly explain the process of empirical research and the steps involved into it.

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5.3 PHENOMENOLOGY

Phenomenology is a philosophy of knowledge that emphasizes direct observation of phenomena. Unlike positivism, phenomenology seeks to sense reality and describes it in words rather than numbers. Words reflect consciousness and perception. The philosophical foundation of phenomenology was developed by Edmund Husserl (1859-1938), who argued that the scientific method, appropriate for the study of physical phenomena, was inappropriate for the study of human thought and action. Phenomenologists concentrate on phenomena per se, and try to produce convincing descriptions of what they experience rather than explaining the causes. Good ethnography is usually good phenomenology. There is no substitute for a good story which is told well with the help of experience.

In the area of psychology, most research is in the quantitative form while phenomenology flourishes in clinical work. In sociology, there is a tradition of qualitative phenomenological research, but the discipline is mostly dominated by the quantitative and positivistic approaches. However, the qualitative and phenomenological researches coexist.

The term phenomenology refers to experientially based methodology which is grounded in the direct experience of a phenomenon with focus on one's own consciousness.

5.3.1 Positivism Vs Phenomenology

The positivist versus the phenomenological approach to the study of man and society is considered in terms of the major debates in social science research. Many of the founding fathers of sociology believed that it would be possible to create a science of society based on the same principles and procedures as natural sciences such as chemistry and biology. This approach is known as positivism. They believed that this would reveal that the evolution of society followed 'invariable laws'. And that it would show that the behaviour of man was governed by principles of cause and effect which were just as invariable as the behaviour of matter, the subject of the natural sciences.

The behaviour of man, like the behaviour of matter, can be objectively measured. Just as the behaviour of matter can be quantified by measures such as weight, temperature, and pressure, methods of objective measurement can be devised for human behaviour. Such measurement is essential to explain behaviour. For example, in order to explain the reaction of a particular chemical to heat, it is necessary to provide exact measurement of

temperature, weight and so on. With such measurements it will be possible to accurately observe the behaviour of matter and produce a statement of cause and effect. From a positivist viewpoint such methods and assumptions are applicable to human behaviour. Observations of behavior based on objective measurement, from this viewpoint, will make it possible to produce statements of cause and effect. Theories may then be devised to explain observed behaviour. It argues that factors, which are not directly observable, such as meanings, feelings and purposes, are not particularly important and can be misleading. For example, if the majority of adult members of society enter into marriage and produce children, these facts can be observed and quantified. They, therefore, form reliable data. However, the range of meanings that members of society give to these activities, their purposes for marriage and procreation are not directly observable. Even if they could be accurately measured, they may well divert attention from the real cause of behaviour. The meanings and purposes they attach to this behaviour are largely in consequential.

Phenomenological perspectives in social research reject many of the assumptions of positivism. They argue that the subject matter of social and natural sciences is fundamentally different. As a result, methods and assumptions of the natural sciences are inappropriate to the study of man. The natural sciences deal with the matter. As a result the natural scientist is able to observe, measure, and impose an external logic on that behaviour in order to explain it. He/She has no need to explore the internal logic of the consciousness of matter simply because it does not exist.

Unlike matter, a human being has consciousness—thoughts, feelings, meanings, intentions and an awareness of being. Because of this, his/her actions are meaningful; he/she defines situations and gives meaning to his/her actions and those of others. As a result, he/she does not merely react to external stimuli, nor does he/she simply have, he/she acts. Imagining the response of early man to fire caused by volcanoes or spontaneous combustion, we can see that she/he did not react in a uniform manner to the experience of heat. He/She attached a range of meanings to it and these meanings directed his/her actions. For example, he/she defined fire as a means of warmth and used it to heat his/her dwellings; as a means of defence and used it to ward off wild animals; and as a means of transforming substances and employed it for cooking and hardening points of wooden spears. Man does not just react to fire; he/she acts upon the terms of the meanings he/she gives to it. The researcher cannot simply observe action from the outside and impose an external logic upon it. He/She must interpret the internal logic which directs the actions of the actor.

The distinction between positivist and phenomenological approaches is not as clear-cut as this section has implied. There is considerable debate over whether or not a particular theory should be labeled positivist or phenomenological. Often it is a matter of degree since many theories lie somewhere between the two extremes.

Check Your Progress 2

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

- 1) Explain the meaning of Phenomenology and how it is different from Positivism.

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5.3.2 Phenomenological Approaches in Social Research

Hermeneutical Phenomenology

One of the most influential phenomenologies for ethnographic field work is that of Paul Ricoeur (Rasmussen 1971), a French student of Edmund Husserl. Hermeneutics has been derived from the Greek verb *hermenein*, meaning to make something clear, to announce or to unveil a message. Hermeneutics involves a dialogue between a text (e.g., myth, drama, fairy story, dream report, oral history, etc.) and the experiences evoked in people participating in the text. The meaning of the text is developed within the consciousness of living people, so that there is a movement from an initial hearing of the text that may then lead to experiences that illuminate the meaning of the text. Later, people may reflect conceptually upon both the text and the memory of experiences related to the text.

Transpersonal Phenomenology

“Transpersonalism” is a movement in science toward the recognition of extraordinary experiences as legitimate and useful data. What makes these experiences extraordinary is that they in some sense go beyond the boundaries of ordinary ego-consciousness. Transpersonal experiences include such phenomena as out-of-body experiences, visions, possession states, near-death experiences, and meditative, ecstatic, unique and mystical experiences. To give one example of the application of transpersonal phenomenology to ethnographic field work, Lederman (1988) reported that among Malay healers, the term *angin* (“Inner Winds”) refers to an experience that sometimes occurs during healing rituals. She mentions that her informants declined to define the concept for her, insisting instead that to know its meaning, she would have to experience *angin* herself. When she finally undertook the healing ritual herself, she experienced *angin* “like a hurricane” inside her chest. Thereafter, Lederman was able to evaluate the meaning of the “wind” metaphor from direct experience. *Angin* ceased to be merely a belief and was appreciated as a metaphorical description of a real and profound experience.

Social Phenomenology

Social phenomenology has had an increasing influence upon anthropological thinking about the social dimensions of experience. Schutz advocated the study of society from a special stance that he called the “phenomenology of intersubjectivity”.

Here, the object of scrutiny is one’s relationship to another person, rather than some nonhuman object in the world. The other person (known as the capital-O “Other”) requires a distinct approach in order that the essential qualities of the social relationship may be intuited.

Neurophenomenology

The best and the most direct route to uncovering the essential structures of consciousness available today is to steep ourselves in the cross-cultural evidence pertaining to human experience and then explore the universal structures of experience via the application of a neurophenomenology. The neurosciences provide an independent source of looking directly at the architecture of the organ of experience, the human brain. Phenomenological anthropology provides a kind of cross-cultural laboratory for exploring these universal structures, as it was, from the inside.

Phenomenology has a history in philosophy dating back to at least the “phenomenology of mind” of Georg Hegel in the early nineteenth century and has left a rich legacy of writings, especially those of Edmund Husserl in the early twentieth century. The influence of phenomenology in social research has been felt only quite recently, however. Whether it applies to recovering the meaning of texts, ascertaining the effects of ritual practices in producing altered states of consciousness, discovering the universal structures underlying social interactions, or uncovering the universal neuropsychological structures producing experience, the telling impact of phenomenology in social research continues. Probably the most important reason for the current attractiveness of phenomenology is that the issue of consciousness, long excluded from much of scientific discourse, has been reintroduced into the domains of ethnographic fieldwork and ethnological theory. Phenomenological methods can be expected to have enhanced importance to the extent that social research becomes more focused on meaning and experience in any transpersonal or social encounters.

Check Your Progress 3

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

1) Describe any two phenomenological approaches in social research.

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5.3.3 Phenomenology and Social Research

The explanations of differential educational attainment that have been presented so far have been largely based on a positivist perspective. They have seen humans reacting to stimuli external to them, to social forces beyond their control. The behaviour of students in the educational system is explained as a reaction to their position in the class structure. Those at the bottom of the stratification system are programmed to fail, those at the top to succeed. They have little say in the matter since their behaviour is largely shaped by forces external to themselves. From an interactionist perspective, man actively constructs social reality. Their actions are not simply shaped by social forces which act upon them. Thus, behaviour is not merely a reaction to the directives of subcultures or the pressures of stratification systems. Whereas the behaviour of matter is a reaction to external stimuli, the actions of the men and women are directed by meanings. They are created, developed, modified and changed in a process of negotiation.

Cultural deprivation theory provides the standard explanation for the widespread failure of low income Black American students in the educational system. The students simply react to their position at the bottom of the stratification system and predictably fail. From close observation of the interaction situations, Labov (1973) provides a very different explanation. He compares three interviews involving an adult and a boy. In the first, the 'friendly' white interviewer presents a black boy with a toy jet plane. He asks him to describe it and prompts him with various questions. There are long silences followed by short two or three word answers, which hardly provide an adequate description of the plane. This behaviour can easily be explained in the terms of the cultural deprivation theory. The boy is unable to provide an adequate description because he is linguistically deprived. His behaviour is a predictable reaction to a culturally deprived environment. Labov offers an alternative explanation based on the boy's interpretation of the situation. He defines the situation as hostile and threatening and therefore his actions are defensive. This is clearly no test of the boy's verbal ability, it simply reflects his perception of the situation.

In the second interview, the context of the interaction is modified. The interviewer sits on the floor, the interviewee is provided with a supply of potato crisps and his best friend is invited along. The change is dramatic. Leon's conversation is articulate and enthusiastic, and, its linguistic terms, rich and diverse. He now defines the situation as friendly and no longer feels threatened by the interviewer. In the first interview he is, in Labov's words, a 'monosyllabic, inept, ignorant, fumbling child's, in the second he is a direct, confident, articulate, young man. What does this mean? Labov state, 'It

means that the social situations are the most powerful determinants of verbal behaviour and what an adult man can do. 'This is just what many teachers cannot do'. More generally, it can be argued from an interactionist perspective that success and failure in school is a product of interaction situations and the meanings that are created, developed and negotiated in such situations. It rejects positivist approaches which assume that human behaviour can be objectively measured and quantified by methods similar to those used in the physical sciences. Thus, factors such as ability cannot be measured in the same way as variables such as weight, temperature and pressure. In order to understand and explain educational success and failure, the interaction processes in the classroom must be examined. The educational researchers must explore the 'ways in which teachers and students interpret and give meaning to educational situations'.

Given the fact that teachers have the power to award grades and assess students, it is important to discover the meanings which direct this process. An early piece of research which attempted to uncover some of these meanings was conducted by Howard S Becker. He interviewed sixty teachers from Chicago high school and found that they tended to classify and evaluate students in terms of a standard of the 'ideal pupil'. This standard included the teachers' view of what constituted ideal work, conduct and appearance. Teachers interpreted the behaviour of the lower class students in terms of lack of interest, lack of motivation and lack of discipline. Becker argues that simply by perceiving certain students in this way, teachers experience problems in working with them. He concludes that the meanings in terms of which students are assessed and evaluated can have significant effects on interaction in the classroom and attainment levels in general.

In a study entitled, the Education Decision Makers, Aaron V Cicourel and John I Kitsuse interviewed counsellors in an American high school in an attempt to uncover the meaning which lay behind their classification of students. The counsellors play an important part in students' educational careers since they largely decide which students should be placed on courses designed for preparation for college entry. Although they claimed to use grades and the results of IQ test as the basis for classifying students in terms of achievement, Cicourel and Kitsuse found significant discrepancies between these measures and the ways in which students were classified. Like Becker, they found that the student's social class was an important influence on the way she/he was evaluated within each society.

5.4 CRITICAL PARADIGM

Critical Paradigm focuses on knowledge as problematic. The paradigm marks systematic distortion. Therefore, the concern of the critical paradigm is to understand critically the roles of theory, as well as, practices in the process of knowledge production.

5.4.1 Paradigms

The first and foremost purpose of a paradigm is to supply a provisional codified guide for adequate and fruitful analysis of knowledge. This objective evidently implies that a paradigm contains the minimum set of concepts with which the researcher must operate in order to carry out an adequate analysis and can mark use of it as a guide for the study of knowledge.

Secondly, a paradigm is intended to lead directly to the postulates and assumptions underlying the analyses. Some of the assumptions are of central importance but the assumptions which are insignificant, dispensable, dubious and misleading can be identified for deletion.

In the third place, a paradigm seeks to sensitize the researcher not only to the narrowly scientific implications of various types of critical analyses, but also to their political and ideological implications. The points at which a critical analysis presupposes an implicit political outlook and the points at which it has bearing on “social engineering” are concerns which find an integral place in the paradigm.

The logic of procedure that a researcher follows, the key concepts, and the relationships between them are often lost in an avalanche of words. When this happens, the critical reader must laboriously glean for the implicit assumptions of the author. A paradigm reduces this tendency for the theorist to employ tacit concepts and assumptions.

Functions of a Paradigm

Paradigms have at least five closely related functions.

First, paradigms have notational functions. They provide a compact arrangement of the central concepts and their interrelations that are utilized for description and analysis.

Second, paradigms lessen the likelihood of inadvertently introducing hidden assumptions and concepts, for each new assumption and each new concept must be either logically derived from previous components of the paradigm or explicitly introduced into it. The paradigm thus provides a guide for avoiding ad hoc (i.e. logically irresponsible) hypotheses.

Third, paradigms advance the cumulation of theoretical interpretation. In effect, a paradigm is the foundation upon which the house of interpretations is built. A paradigm worthy of great confidence will in due course support an interpretative structure of skyscraper dimensions, with each successive story testifying to the well-laid quality of the original foundation, while a defective paradigm will support only a rambling one-story structure, in which each new set of uniformities requires a new foundation to be laid, since the original cannot bear the weight of additional stories.

Fourth, paradigms, by their very arrangement, suggest the systematic cross-tabulation of significant concepts and can thus sensitize the analyst to

empirical and theoretical problems which he/she might otherwise overlook. Paradigms promote analysis rather than the description of concrete details.

Fifth, paradigms make for the codification of qualitative analysis in a way that approximates the logical if not the empirical rigour of quantitative analysis. The procedures for computing statistical measures and their mathematical bases are codified as a matter of course; their assumptions and procedures are open to critical scrutiny by all.

5.4.2 Elements of Critical Social Research

Critical social research is extremely varied, but critical methodology is based on a number of building blocks. These blocks should not be considered as discrete units which can simply be placed next to one another. They are elements which are drawn together in various ways in the process of deconstruction and reconstruction. And they are abstraction, totality, essence, praxis, ideology, history and structure.

Critical social research denies that its object of study is 'objective' social appearances. It regards the positivistic scientific method as unsatisfactory because it deals only with surface appearances. Instead, critical social research methodology cuts through surface appearance. It does so by locating social phenomena in their specific historical context. Historically specific phenomena cannot be regarded as independent on the contrary they are related to other phenomena within a prevailing social structure. Critical social research analyses this structure. Social structures are maintained through the exercise of political and economic power. Such power (grounded in repressive mechanism) is legitimated through ideology. Critical social research thus addresses and analyses both the ostensive social structure and its ideological manifestations and processes.

In examining the context of social phenomena, critical social research directs attention at the fundamental nature of phenomena. Rather than take the abstract phenomena for granted, it takes apart (i.e., deconstructs) the abstraction to reveal its inner relations and thus reconstructs the abstract concept in terms of the social relations that inform it.

This process of deconstruction and reconstruction is effective in terms of the wider societal perspective, that is, in terms of a totalistic approach. A totalistic approach denies the relevance of looking at one element of a complex social process in isolation and argues that elements have to be looked at in terms of their interrelations and how they relate to the social structure as a whole. So critical social research is concerned with the broad social historical context in which phenomena are interrelated. It is concerned with revealing underlying social relations and showing how structural and ideological forms bear on them. It, then, is interested in substantive issues, and wants to show what is really going on at a societal level. Not only does it want to show what is happening; it is also concerned with doing something about it.

Abstraction

Abstraction is usually construed in terms of a distillation of sensory perception of the world of objects into conceptual categories. We start from the (literally) objective world and select out the recurrent or apparently the core or the defining features until an abstract concept is formulated (at least in our minds if not in a directly communicable form). This process of distillation of some features from a set of observed objects is at the basis of most systems of classification.

The process may be acceptable to phenomena list approaches to knowledge, which involve an implicit assumption that science begins with factual observations and abstracts from them, but it is not adequate for critical social research. Indeed, the starting point for critical social research is to reverse this normal process of abstract thought.

Critical social research admits that facts do not exist independently of their theoretical context. If facts are not self-evident then concepts cannot be abstracted from them. Critical social research thus works by moving from the abstract to the concrete. It starts with abstract generalizations and investigates them.

Critical methodology's use of abstractions, therefore, differs from the positivist's use because, rather than simply providing a basis for ordering appearances, they are used to get beneath the surface of appearances. Instead of simply adopting an empirical approach and logging housework tasks, a critical approach relates house work to the wider sphere of production and sees it as a work relationship. The penetration of this mode of productive relations begins to get beneath the surface of appearances. The superficial taken-for-granted 'task view' of house work is replaced by dynamic conception which provides the basis for a holistic critique of social processes.

Totality

Totality refers to the view that social phenomena are interrelated and they form a total whole. It implies that the social phenomena are situated in a wider social context. They cannot be analyzed in isolation. A totalistic perspective implies that the components of a phenomenon are interrelated into a coherent structure. They have meaning in terms of the structures they form and in turn the structure integrates the component parts.

In adopting an approach in terms of totality, critical social research attempts to relate empirical detail to a structural and historical whole. Crucial to a critical methodological approach to history and structure are three things. First, an appreciation that social relations are historically specific. Second an appreciation of the structural relations operating within a historical moment. Third, an appreciation of the structural relations operating within that historically specific structure and specific phenomena forms.

Essence

Essence refers to the fundamental element of an analytic process. Most positivists regard essence as bordering on the metaphysical. Their only concern is to understand the essential causal links of social and physical process. Phenomenologists, investigating the social world, view essences in a rather different way. They seek the essential nature of social phenomena or social relations, that is, some kind of a core of being or an engagement with a stream of consciousness, or, less transcendently, the set of constructs that informs interactive processes. For critical social researchers, essence is a fundamental concept that can be used as the key to unlocking the process of deconstruction.

Praxis

Praxis means practical reflective activity. It is what humans do most of the time. Praxis does not include 'instinctive' or 'mindless' activity like sleeping, breathing, walking, and so on, or undertaking repetitive work tasks. Praxis is what changes the world. For the critical social researcher, knowledge is not just about finding out about the world but it is changing it. It is important, therefore, that a critical social researcher engages in praxis. However, the critical social researcher is not interested in the specific actions or reasons for actions of an individual. Individual actions are simply indicative of social groups operating within an oppressive social structure and/or historical juncture. What critical social research must take account of, in some way, is that changes in social formations are the results of praxis. So the subjects of any enquiry are analysed in terms of their potential for developing group action. Further, however, critical social researchers engage with oppressive social structures, and their own enquiries thus embody praxiological concerns. Critical social research is thus intrinsically praxiological.

Ideology

'Ideology' has not been properly analysed in the conventional social research. The difficulty in 'objectivizing' ideology has led some social scientists to regard it as beyond scientific analysis and thus not important, or to replace it with terms like 'norms', and 'values'. These alternative concepts, while attempting to operationalize the idea of social legitimations, dispense with the critical element and are of little use in developing a critical analysis which goes beneath surface appearances.

Ideology as a concept has a long history but it developed its current usage as an analytic and critical tool in the work of Marx and has been an important feature of Marxism. Marx suggested that ideology is present from the moment when social relations take on a historical and hierarchical form. There are, arguably, two approaches to a critical analysis of ideology, the positive and the negative views of ideology (Larrain, 1979, 1982). Ideology, of course, does not simply relate to class exploitation. Gender race and other forms of oppression have been legitimated in ideological terms. Patriarchal

and racist ideologies can be seen as part of or alternatives to class-based hegemony.

Structure

‘Structure’ is a term used in two ways in social research. Its principal meaning and the one applicable to critical social research is of structure viewed holistically as a complex set of interrelated elements which are interdependent and which can only be adequately conceived of in terms of the complete structure. An alternative use of the term ‘structure’ is to see it as something that can be reduced to its elements. The complexity of a structure is decomposed into a network of linked parts with a view to exposing the elements and simplifying the whole. It is assumed that the elements make sense in their own right. This is more aptly described as a ‘system’. Possibly the easiest way to distinguish structure from system is to see a system as congealed patterns of interaction, and structure as underlying model of the world that structuralists seek to identify.

History

History refers to both the reconstructed account of past events and the process, by which this reconstruction is made, that is, the process of doing history. History writing then involves both a view about the nature of history and the assembling of historical materials. There are a number of ways of ‘doing’ history and a number of different schemes of categorising history. Rather than assess these differing views, the nature of the historical perspective embodied in critical social research will be outlined.

Critical social research involves two essential elements, the grounding of a generalized theory in material history and the exposure of the essential nature of structural relations which manifest themselves historically. Critical social research does not accept that history is essentially ‘factual’. It denies that history exists and is just lying around waiting to be unearthed by the historian. Like the product of the activity of the historian, reconstructing history is the result of an active interpretation of the available archaeological, documentary, or oral evidence.

Approaches that adopt a view of history as an interpretative process rather than the gathering of already existing facts are usually referred to as historicist approaches.

Historicism has been adapted as an approach for critical social research in its radical formulations. Radical historicism adopts the basic historicist tenets of history as a presentist, objectivist and interpretative process but in one way or another attempt to dig beneath the surface of historical manifestations.

Structural historicism is the process of reconstructing a honed-down history, devoid of confusing instances, as a result of new perspective gained from a critique of prevailing social structures. This approach analyses the prevailing structure and its ideology, deconstructs it, and then reconstructs a logical

history guided by the structural analysis. The point of reference for the historicist reconstruction is not the prevailing social system or contemporary perspective but the radical, dialectically reconstructed, social structure.

So, like all aspects of critical social research, history is not just there waiting to be picked up and fitted into the critical historical account. History has to be researched and critically evaluated as well. Within critical social research the reconstruction of history takes place alongside the structural analysis; it both informs and is informed by it.

Deconstruction and reconstruction

Deconstruction and reconstruction begin from the abstract concepts, which are applied to, or used in relation to, an area of investigation. In practice, there may be a large list of concepts. It is not necessary to attempt a separate critical analysis of each. They are all interrelated and so the 'key' is to locate a central concept and critically analyse it. From that, the other concepts can be reconstructed.

Before addressing how the central concept is analysed, it is important to note that the deconstructive-reconstructive process is not just abstract concept analysis tacked on to the usual idealized sequence of events in a research undertaking. Critical social research is not embodied in a series of discrete phases. It is not just abstract concept analysis followed by hypothesis generation, data collection, data analysis, and the generation of results, with the implications for a theory added at the end. Critical social research develops the different elements in parallels, each aspect informing each of the other aspects.

The researcher is concerned with a realm of enquiry, usually provoked by a particular question that demands attention, such as, why do some youngsters not make the most of the opportunity offered by the education system, or should women get paid for housework. These questions frame an area of enquiry. The first job is to explore its central concepts. The selection of a central concept is not simple, but, as we shall see in the substantive examples.

To sum up, the dialectical deconstructive-reconstructive process can be conceived as a process of focusing on the structural totality or historical moment. The totality is taken initially as an existing whole. This structure presents itself as natural, as the result of historical progress, i.e., it is ideologically constituted. The critical analysis of the historically specific structure must therefore go beyond the surface appearances and lay bare the essential nature of the relationships that are embedded in the structure. This critique ostensibly begins by fixing on the fundamental unit of the structural relationships and decomposing it. The fundamental unit must be reconstituted in terms of this essentialized construct. The reconstructive process reveals the transparency of ideology. The whole is grounded in historically specific material reality.

5.4.3 Critical Research Process

Doing social research is not just about selecting and constructing a data collection technique. On the contrary, it embraces conceptualization of the problem, theoretical debate, and specification of research practices, analytic frameworks and epistemological presuppositions. Data collection is not a self-contained phase in a linear process. Rather, all aspects of the research process are interrelated and all bear on each other. There is no neat linear sequence of events of the idealized research report format (i.e., theoretical back ground, hypothesis, and design of research instrument, data collection test of hypothesis, findings, and implications for theory). However much the idealized form of research design and presentation get imposed on other form of research, critical social research is not conducive to such manipulation.

Critical social research deconstructs and reconstructs. But this is not like taking a house apart brick by brick and building a bungalow using the same bricks. Reconstruction is, not rebuilding but re-conceptualization. The nature of re-conceptualization process emerges only as the illusion of the existing taken for granted structure is revealed. There is a shuttling back and forth between what is being deconstructed and what is being reconstructed. The nature of both emerges together. In short critical social research is a dialectical process that cannot be broken down into successive discrete stages.

So what do you do as a critical researcher (as opposed to do what do you say you did when reporting the research)? You have to start somewhere and there is no better place than with the observation, concern, frustration or doubt that provoked the enquiry. Ask yourself why things are, as they appear to be. But frame the question, not in terms of 'what are the causes?' or 'what does this mean?' but rather as 'how does it persist?' Ask 'how nothing is done about it?' or 'how is it that people accept what clearly is not in their interest?' Ask such questions and from there get a clearer picture of what you are really asking about.

Asking these kinds of questions will lead you to three related lines of enquiry. First, what is essentially going on? Second, why has this historically been the case? Third, why structures reproduce this state of affairs?

Empirical enquiry will start to provide a clearer focus for the questions. Through empirical enquiry, broad abstractions can be filled out and made concrete.

Make connections between myths or contradictions that emerge from the empirical enquiry and broader stereotypes or ideological constructs. Relate the myths and/or contradictions back to the empirical data on the one hand and to broader social structures on the other.

Do not just assume relationships as the enquiry develops but undertake further empirical enquiry. Begin to reveal the nature of ideological forms,

how they impinge upon the area of enquiry, and whose interests are served by them? Gradually bring the specific and the social, the immediate and the historical together in a totalistic analysis.

Critical social research is praxiological, so it is necessary to examine in detail how people collude in their own oppression, how they are persuaded to reproduce historical social structures, and so on. It is a close and detailed study which shows how historical oppressive social structures are legitimated and reproduced in specific practices. Critical research thus raises consciousness, subverts in legitimating processes, and provides clear analyses of the nature and operation of the oppressive structures. Critical research must be detailed if it is to be revealing and convincing. Empirical evidence is crucial. Such evidence may arise from asking people questions, or by watching and participating in what people do, or by reviewing what has happened in the past, or by analysing cultural products. Data may be aggregated or treated as unique testimony.

Do any or all of these things turn to be appropriate to advancing the enquiry? But make sure that techniques are undertaken within a critical methodology. What is important is that nothing is taken for granted and that what is, or has been, done or said is related to historical developments and social structures?

Having done the study and gained an understanding, the production of a report is your chance to share that understanding with others. The 'traditional' approach to research reporting tends to a structure which idealizes the research process as a logical sequence of discrete phases. It suggests an introduction which provides an overview of the context, a literature review, the identification of the theoretical concern of the research, the specification of hypothesis, a central block of 'results', an analysis of the results, the implications for theory, and suggestions for further research.

Critical social research is primarily concerned with analysis and reporting of substantive issue. This is the central focus of the work. In any critical social research report must indicate what central question is being addressed. A central plot must be identified and this plot sustained throughout. In effect, the core argument remains as a skeleton which is filled out by empirical details.

Check Your Progress 4

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

- 1) What are the two ways in which the term structure is used in social research?

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5.4.4 Approaches in Critical Social Research

Critical social research makes considerable use of four approaches: critical case study, radical historicism, critical ethnography, and structuralist techniques. This is not, in any way, meant to delimit what approaches critical social researchers can adopt nor do these four approaches constitute a set of mutually exclusive alternatives.

Critical case study

In a critical (or theoretical) case study, the researcher deliberately selects, for detailed empirical analysis, a case which provides a specific focus or analysis of a myth or contradiction. This approach is effectively adopted by Cockburn (1983).

A variety of different data collection techniques can be adopted within a critical case study approach. The researchers relied principally on structured interviews augmented by observation in ascertaining the interests, attitudes, social networks and life-styles of their case study groups. Cockburn (1983) preferred in depth-interviewing with the case study group.

There is nothing inherently advantageous in any particular data collection method for critical case study. The case study is not end in itself rather it is an empirical resource of the exploration of wider questions about the nature of oppressive social structures. What is important is that the study is designed to critically address myths or contradictions at the level of actual practices that relate to broader questions about the operation of oppression.

Radical historicism

Radical historicism presupposes that constructing histories is an interpretative process rather than the recording of 'facts'. Although reconstructing the past in terms of the present in one way or another, it attempts, to dig beneath the surface of the historical development of structural forms.

Radical historicism involves the uncovering of historical evidence but the meaning of the evidence depends on a re-conceptualization of dominant social structures. The reconstruction of history takes place alongside structural analysis; it informs and is also informed by it.

Critical ethnography

Critical ethnography is a widely used technique in critical social research. The involvement and close attention to detail which characterizes ethnography makes it useful for rendering visible the invisible, and for revealing anomalies and common-sense notions. A critical ethnography transforms the anomalies and taken-for-granted into contradictions and myths by situating them in broader social and historical analyses. Critical ethnography thus focuses on the way in which contradictions are negotiated and myths re-presented.

Critical ethnography differs from conventional or traditional ethnography in its attempt to link the detailed analysis of ethnography to wider social structures and systems of power relationships. In essence, critical ethnography attempts, in one way or another, to incorporate detailed ethnographic analysis directly into a dialectical critique.

Critical ethnography proceeds by raising substantive questions about structural relationships which the ethnographic study elaborates in terms of actual practice. Like the critical case study, the details of the ethnographic work are a resource in the deconstruction of social structures. Critical ethnography makes use of the same data collection technique as conventional ethnography (in-depth interviewing, participant observation, etc.) and is also reflexive. However, there is far less concern with 'neutrality' both, in terms of the interventionist role of the researcher, and the presentation of a non-partisan perspective.

The intention is to go beyond the grasping of the subjects' meanings. Critical ethnography asks how these meanings relate to wider cultural and ideological forms. It involves keeping alert to structural factors while probing meanings. Through ideological analysis, critical ethnography aims to reveal both contradictions and myths. In consistencies, for example, between what people do and what they say are transformed from anomalies to contradictions. What, for example, black community college students had to say about time keeping and what they actually did, was anomalous. It became an analytic contradiction, once it was explained in terms of the notion of 'white man's clock time' lip-service to the white middle-class meritocratic system while living in an everyday milieu that operated on a different sense of time.

Structural techniques

There are two main structuralist techniques incorporated into critical social research. First, there is semiological analysis, which attempts to uncover the connoted level of denoted messages. This approach is widely used in relation to the mass media but is applicable to, and derives from, a general approach to the analysis of any sign system. Semiological analysis sees a sign as any cultural symbol which conveys a meaning. The sign is made up of two elements, signifier and signified. The signifier is a sound or image which signifies something. For example, the sound 'dog' is a signifier for a 'four-legged mammal that barks'. What is signified is the concept 'dog'. Hence the sign is the concrete relation between concept (signified) and sound/image (signifier). Signs are arbitrary. They have no intrinsic meaning of a sign comes from its difference from other signs. The key of semiological analysis is that, signs do not have intrinsic meaning. Meaning is generated through the relationship of signs.

The second structuralist technique centres on the identification of binary oppositions and narrative sequences. The approach again draws on linguistics and presupposes that the structure of language is inherently dichotomous and,

consequently, the symbolic meaning of an image is determined only by differences. When, for example, two characters in a study are opposed in a binary structure, their symbolic meaning is virtually forced to be both general and easily accessible because of the simplicity of the differences between them. This binary structure operates to provide conceptual differences and each society has a system of such oppositions; it is through them that myths are (unconsciously) understood by members (Levi-Strauss, 1963).

A second aspect of this technique is the deconstruction of a narrative into a set of functions. Propp (1968), for example, in analysing Russian fairy stories, identified a set of shared functions that recurred in the same order. This structuralist approach is transformed into a critical social research process when the binary oppositions and the narrative functions are related to the prevailing socioeconomic and political structure. It is then that their social meaning becomes manifest.

Check Your Progress 5

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

1) Describe briefly the approaches in critical social research.

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5.5 LET US SUM UP

Empirical research depends on observation and induction. The empiricist uses all kinds of research tools: observation—both participant and non-participant, formal interviews, structured, semi-structured, unstructured and in-depth interviews, analysis of documents, mass media analysis, archive searching, examination of official statistics and reviews of published data.

He/She also uses a wide variety of analytic techniques: ethnographic interpretations, historical reconstructions, action research, multivariate analysis, structuralist deconstruction and semiological analysis. Phenomenology and critical research are two major approaches that have developed in recent times.

Phenomenological perspectives in social research reject many assumptions of positivism. They argue that the subject matter of social and natural sciences is fundamentally different.

Phenomenology is a philosophy of knowledge that emphasises direct

observation of phenomena. Phenomenologists concentrate on phenomena per se, and try to produce convincing descriptions of what they experience rather than explanations and causes. The most important reason for the current attractiveness of phenomenology is that the issue of consciousness, long excluded from much of scientific discourse, has been reintroduced into the domains of ethnographical fieldwork and ethnological theory. Phenomenological methods can be expected to have enhanced importance to the extent that social research becomes more focused on meaning and experience in any transpersonal or social encounter.

The critical social researchers are not like other researchers who merely talk rather than observe, or merely observe rather than think, or merely think rather than put their thoughts to the test of systematic empirical investigation. Doing critical social research is not just about selecting and constructing a data collection technique. On the contrary, it embraces conceptualization of the problem, theoretical debate, specification of research practices, analytic frameworks and epistemological presuppositions. Critical research presents the hard core of concept, procedure and inference in the analysis of social research. It does not represent a set of categories introduced a new, but rather a codification of those concepts of problems which have been forced upon our attention by critical scrutiny of current research and theory.

Critical research digs beneath the surface of extensive appearances through direct analysis of social phenomena. The concepts which frame and define an area of enquiry are themselves subject to critical analysis. Specific phenomena are analysed in terms of the way they relate to wider social structures and in terms of historical manifestations. The critical rebuilding involves a process of conceptual shuttling back and forth between the particular phenomena under investigation and the wider structure and history to which it relates, between the theoretical deconstruction and the reconstructed social totality.

5.6 CHECK YOUR PROGRESS: THE KEY

- 1) An empiricist is one who practices empiricism, i.e., the system which rejecting all a priori knowledge rests solely on experience and induction.

The steps involved are: a) collecting data, b) measurement, c) classification and tabulation of data, d) analysis and reduction, e) formulation of hypothesis, and f) formulation of theory.

- 2) Phenomenology is a philosophy of knowledge that emphasizes direct observation of phenomena. The difference between phenomenology and positivism is:

- Positivism is a scientific study of social problem based on the same principles and procedures as natural sciences such as chemistry and biology.

- Phenomenology rejects many of the assumptions of positivism as it regards the subject matter of social and natural sciences to be fundamentally different.
 - Meanings, feelings and purpose of the phenomena are not directly observable under positivistic approach.
 - Phenomenologists argue that methods and assumptions of the natural science are inappropriate to study man and society.
 - Phenomenologist defines situations and gives meaning to his actions and those of others.
- 3) The two approaches are: Hermeneutical and Social Phenomenology
Hermeneutics involves a dialogue between a text which can be a story or a drama and the experiences evoked in people who are participating in the text. Social Phenomenology has an increasing influence upon anthropological thinking about the social dimensions of experience.
- 4) The structure is used as a complex set of interrelated elements which are independent and which can only be adequately conceived of in terms of the complete structure. An alternative use of the term structure is to see it as something that can be reduced to its elements.
- 5) Critical Social Research uses four approaches. These are:
- Critical case study: the researcher deliberately selects for detailed empirical analysis a case which provides a specific focus for or contradiction.
 - Radical historicism: reconstructing the past in terms of the present and digging beneath the surface of historical development of structural forms as an interpretative process.
 - Critical ethnography: the involvement and close attention to details is useful for revealing anomalies and common sense notions.
 - Structural techniques:
 - a) semiological analysis, which attempts to uncover the connoted level of denoted messages.
 - b) Identification of binary oppositions and narrative sequences for the deconstruction of narrative into a set of functions.

References

[Given below are the titles which have been used to prepare this Unit. It is not suggested that you should go looking for these books to study them in original. If you can manage, you may look for a few titles, but they are not obligatory for completing the course successfully.]

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UNIT 6 DESCRIPTIVE AND EXPERIMENTAL RESEARCH

Structure

- 6.0 Introduction
- 6.1 Objectives
- 6.2 Descriptive Research
 - 6.2.1 Descriptive Research: Main Steps
 - 6.2.2 Types of Descriptive Research
- 6.3 Experimental Research
 - 6.3.1 Three Characteristics of Experimental Research
 - 6.3.2 Steps Involved in Experimental Research
 - 6.3.3 Design of Experimental Study
 - 6.3.3.1 Pre-experimental Design
 - 6.3.3.2 True Experimental Design
 - 6.3.3.3 Quasi Experimental Design
 - 6.3.3.4 Factorial Design
 - 6.3.3.5 Time Series Design
- 6.4 Let Us Sum Up
- 6.5 Check Your Progress: The Key

6.0 INTRODUCTION

As you studied in the previous Units, a ‘research method’ is a particular way of studying a problem. The features of the research problem and also the field of inquiry determine the ‘method’. In this Unit we shall discuss Descriptive Method and Experimental Method of research in detail.

6.1 OBJECTIVES

After the completion of this Unit you should be able to:

- describe the steps involved in descriptive research;
- explain the characteristics and features of types of descriptive research such as survey research, documentary analysis, correlational studies and causal-comparative studies;
- describe the steps involved in experimental research; and
- identify and explain a few designs for experimental studies.

6.2 DESCRIPTIVE RESEARCH

Descriptive research studies are designed to obtain information concerning the current status of a given phenomenon. They are concerned with the

existing conditions or relationships, prevailing practices, current beliefs, points of view or attitudes, processes that are going on and their effects and the developing trends. In short, it determines the nature of a situation as it exists at the time of study. The aim of descriptive research is to describe “what exists” with respect to variables or conditions in a situation.

The descriptive research method is appropriate in behavioural sciences. Many types of behaviour that interest the researcher cannot be arranged in a realistic setting. For example, it would be unthinkable to prescribe cigarette smoking for the purpose of studying its possible relationship to throat or lung cancer, or deliberately arrange accidents, in order to evaluate the effectiveness of seat-belts or helmets in preventing serious injuries.

Although some experimental studies of human behaviour can be appropriately carried out both, in laboratory and in the field, the prevailing method used in social sciences is descriptive. Under the conditions that naturally occur at home, inside the classroom, on the playground or within the community, human behaviour can be systematically examined and analysed. This analysis may lead to the modification of factors or influences that determine the nature of human interaction. It is through this modification of factors that social institutions may become more effective influences in promoting human welfare.

6.2.1 Descriptive Research: Main Steps

In descriptive studies, we do not present private convictions and data based on casual or cursory observations. In descriptive study, we:

- i) examine the problematic situation,
- ii) define our problem and state our hypothesis,
- iii) list the assumption upon which our hypothesis and procedures are based,
- iv) select appropriate subjects and source material,
- v) select or construct technique for collecting data,
- vi) validate the data gathering techniques,
- vii) make objective and discriminating observations,
- viii) describe, analyse and interpret our data in clear, precise terms.

We, as researchers, collect evidence on the basis of some hypotheses, tabulate and summarize the data carefully, and then analyse the results thoroughly in an endeavour to draw meaningful generalization that will advance knowledge.

Collection of data

When presenting a descriptive research report, one must identify not only the kind of data obtained but also the exact nature of its population. The units that constitute a population may be people, items, events or objects. After

identifying the population, one must decide whether to collect data from (a) the total population or (b) a representative sample of the population.

- a) **Total population:** Obtaining information from every unit of a small population is not difficult in most instances, but the findings are not applicable to any population other than the group studied. After collecting information from every student in one particular study center, you may, draw generalizations about the average age or the kind of profession of students in the center; but, you cannot claim that these generalizations will hold true for students in any other study center. Similarly, after studying the attitude of teachers of the School of Continuing Education in IGNOU towards the Distance Education Programme, a researcher cannot claim that the findings will hold true for teachers in other schools of IGNOU.
- b) **Sample:** Obtaining information from a large population, such as all teachers in the state, is often impractical, impossible or exorbitantly costly. Contacting, observing, measuring or interviewing every unit in the group may need so much time that the data becomes obsolete before the study is complete. To overcome these difficulties, investigators often collect information from a few carefully selected units drawn from a population. While carrying out the research on Study Habits of undergraduate students of IGNOU, the researcher cannot collect data from all the 50,000 undergraduate learners. He/She will have to select a representative sample of the population. However, the sample will have to be selected from different categories of the population, viz., male/female, employed/unemployed etc. If these sample units represent accurately the characteristics of the population, generalizations based on the data obtained from them may be applied to the entire group. But selecting a representative sample is a difficult task. How to select a proper sample is the topic of discussion in Unit 1, Block 3.

Descriptive data may be expressed qualitatively (in verbal symbols) as well as quantitatively in mathematical symbols. A study may consist almost exclusively of one form or may contain both forms. Qualitative data may predominate in studies that examine the general nature of a phenomena. Qualitative studies give social scientists useful information, but verbal symbols lack precision as words do not hold the same meaning for all people, at all times, and in all contexts. However, qualitative studies need not be looked down upon; for, they help workers identify the significant factors to measure. Until these general explorations are made, measurement cannot be utilized fruitfully.

6.2.2 Types of Descriptive Research

- i) **Survey studies:** Quite often, descriptive research itself is termed survey research, but it is better to think of it as a category under descriptive research.

‘Survey’ is probably the most widely used method for obtaining descriptive and evaluative information in social research. When trying to solve problems, non-governmental, governmental, industrial and political, organizations often conduct surveys. Detailed descriptions of existing phenomena are collected with the aim of employing the data to justify current conditions or practices or to make more intelligent plans for improving them. The objective may not only be to ascertain status, but also to determine the adequacy of status by comparing it with selected or established standards. Researchers who wish to improve existing status of health of children may survey how others have solved similar problems. At times, we need to collect all three types of information:

- Data concerning existing status, e.g., to find out the study habits of postgraduate students of IGNOU,
- Comparison of status and standards, e.g., to compare the achievement level of distance education students and conventional education students, and
- Means of improving status e.g., to find out measures to improve student support services in distance education programmes.

On the other hand, we can also limit our studies to one or two of these types. Surveys may be broad or narrow in scope. They may be confined to a small geographical area or whole state or even the country. The scope and the depth of the survey depend primarily on the nature of the problem. The steps involved in the case of surveys are presented as follows:

- a) **Selection of topic** involves the determination of what topic is to be investigated and what population is to be studied. At this stage, one also decides the methods and procedures that will be used to collect the data.
- b) **Sampling** involves decision making about which people from the population are to be included in the survey. If one is to generalize from the sample to the population, it is essential that the sample selected be representative.
- c) **Construction of a tool for data collection** involves writing the questions and planning the format of the instrument to be used. Among the data collection techniques used in surveys are personal interviews, questionnaires, rating scales, etc.
- d) **Collection of data includes pre-testing the instrument to determine whether** it will obtain the desired data, interviewing subjects or distributing questionnaires to them, and verifying the accuracy of the data gathered.
- e) **Processing and analysis of the data** includes tabulating the data, computer processing and analysis of the data, interpreting the results, and reporting the findings.

- ii) **Analysis of documents:** From documents and records, we can unearth pertinent data. Documentary analysis, which is sometimes referred to as 'content', 'activity' or 'informational' analysis is very much like historical research. Both methods of investigation require that researchers examine existing records: historical research is primarily concerned with the more distant past, but descriptive research is concerned chiefly with the present.

A wide variety of documentary surveys are made. Some scholars analyse judicial decisions, state laws and rulings. Researchers may also collect data describing existing NGO's practices, processes and conditions from administrative records, committee reports and minutes of meetings, budget and financial records, etc. Documentary research produces valuable information, but the method has certain limitations, and investigators may draw faulty conclusions from the data.

Some documentary researches are of little value because the investigators fail to analyse the representative sample of source materials. Many studies do not provide information concerning the adequacy of the sample size or the conformity of the universe of the sample to the universe. If an analysis is made of newspaper editorials concerning the problems of agricultural labour, for example, the researcher must judge for himself/herself whether the newspapers selected represent the opinion of the different social, religious, economic or political groups from all the parts of the country. Very often, the write-ups are not representative in nature.

Documentary research is not without other pitfalls as well. Data do not become true reflections of reality through the magic of publication. In using documentary sources, one must bear in mind the fact that data appearing in print are not necessarily trustworthy. One must subject each documentary source material to the same rigorous external and internal criticism that a historian does. Moreover, the categories used in the available statistical material do not always coincide precisely with the variables which the researcher wants to investigate. Sometimes the definitions of categories are ambiguous, and they may change from year to year. The boundaries of some units of analysis, e.g., villages, districts, age cohort, etc. can also change; different agencies collecting similar data do not always use exactly the same classificatory system. The data collected always reflect the orientation, concerns, self-interests, and the levels of accuracy preferred by the producers of the records, which may not be an accurate reflection of reality or behaviour.

Check Your Progress 1

Explain the steps involved in survey studies. Describe briefly the objectives of documentary analysis.

Note:a) Space is given below for your answer.

- b) Compare your answer with the one given at the end of this unit

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- iii) **Correlational studies:** Human behaviour at both, individual and the social levels is characterized by great complexity. However, given the present state of social research, we understand too little of this complexity. One approach to a fuller understanding of human behaviour is to begin by testing out simple relationships between those factors and elements which are supposed to have some bearing on the phenomenon in question. The value of correlational research is that it is able to achieve this end. We know that one of the primary purposes of science, as conceived traditionally, is to discover relationships among phenomena with a view ultimately to predicting and, in some situations, controlling their occurrence.

Much of social sciences research is concerned at our present stage of development with the first step in this sequence, i.e., establishing interrelationships among variables. Correlational studies are concerned with determining the extent of relationship existing between variables. They enable us to measure the extent to which variations in one variable are associated with variations in another. We may wish to know, for example, how delinquency is related to social and class background, or whether a relationship exist between the number of years spent in full-time education and subsequent annual income, or whether there is a link between personality and achievement.

Correlational studies are generally intended to answer three questions. They are:

- a) Is there a relationship between two variables (or two sets of data)? If the answer to this question is 'yes', then other questions follow:
- b) What is the direction of the relationship? And
- c) What is the magnitude of the relationship? The magnitude of the relationship is determined by the coefficient of correlation.

For instance, on the basis of his/her experience, a researcher may hypothesize that there is a relationship between performance in an intelligence test and a test of achievement in arithmetic. The correlational technique will help him test his/her hypothesis about the relationship. Pearson's product moment, one of the best known measures of association, is a statistical value of the coefficient of correlation ranging

from -1.0 to $+1.0$, through zero and expresses relationship in quantitative form. Where the two variables fluctuate in the same direction, i.e., as one increases so does the other, a positive relationship is said to exist. A negative correlation or relationship, on the other hand, is to be found when an increase in one variable is accompanied by a decrease in the other variable. The values near zero indicate a weak relationship between the variables, whereas values closer to either $+1.0$ or -1.0 indicate a stronger relationship in either of directions. Thus, the coefficient of correlation, tells us something about the relationship between two variables. However, other measures exist which allow us to specify relationship when more than two variables are involved. These are known as measures of multiple correlation and partial correlation. (We will not go into details about these measures over here.)

One danger in interpreting correlations is to assume that because two variables are related in a predictable fashion to one another with a high degree of probability, they are also in a causal relationship. This is not necessarily the case. For one thing there is never more than a probable relationship between variables in any case. For another, it is quite possible for two variables to be related to one another with a high degree of probability but with a third variable accounting for the nature of relationship. Correlation must not be interpreted to mean that one variable is causing the scores in other variable to be what they are. For example, it may be found that there is a negative correlation between measures of anxiety and measures of intelligence. It should not be interpreted that there is a causative relationship between anxiety and intelligence, that is, that pupils are anxious because they are unintelligent or that pupils appear unintelligent because they are anxious. It might be that there are other underlying characteristics of individuals that tend to make some appear unintelligent and anxious, and others, intelligent and not anxious. Interpretation of such a correlation is difficult without experimental confirmation, For example, the relationship between anxiety measures and intelligence measures could be investigated experimentally by deliberately inducing anxiety in a testing situation and determining the effect on intelligence test scores.

Characteristics of correlational studies

Correlational studies can be broadly classified either as relational studies or as prediction studies. As a method, the former is particularly useful in exploratory studies in fields where little or no previous research has been undertaken. It is often a shot in the dark aimed at verifying hunches which a researcher has about a presumed relationship between some characteristics or variables. Take a complex notion like teacher effectiveness for example. This is dependent on a number of complex factors operating singly or in combination. Factors such as intelligence, motivation, person, perception, verbal skills, etc., come to mind as possibly having an effect on teacher outcomes. A review of the literature

of research will confirm or reject these possibilities. Once an appropriate number of such possibilities has been identified in this way, suitable measures may then be chosen or developed to assess them. They are then given to a representative sample, and the scores obtained are then correlated with the complex factor that is being investigated, namely, teacher effectiveness. As it is an exploratory undertaking, the analysis will consist of correlation coefficients only. The investigation and its outcomes may then be used as a basis for further research or as sources of additional hypotheses.

In contrast to exploratory research studies, prediction studies are usually undertaken in an area having a firmer and securer knowledge base. Prediction through the use of correlational technique is based on the assumption that at least some of the factors that will lead to the behaviour to be predicted are present and measurable at the time the prediction is made. For example, since we know that IQ and General Achievement (GA) are positively correlated, we can predict with some degree of accuracy that an individual with a high IQ will probably have a high GA. To be valuable for prediction, the extent of correlation between two variables must be substantial and, of course, the higher the correlation, the more accurate the prediction.

- iv) **Causal-comparative studies:** There is, at times the need to discover how and why a particular phenomenon occurs, and not confine our investigation to what a phenomenon is like. In this instance, the investigator tries to compare the similarities and differences among phenomena to find out what factors or circumstances seem to accompany or contribute to the occurrence of certain events, conditions or practices.

Unlike a scientist working in a laboratory, a social researcher cannot always select, control and manipulate factors that are necessary to study cause-effect relations. An investigator cannot, for example, manipulate domestic background, social class, intelligence, etc. in situations that do not allow researchers manipulate the independent variable and establish the controls that are required in “true experiments”, they may conduct a causal-comparative study.

In a causal-comparative investigation, a researcher studies a real life situation in which subjects have experienced what he/she want to investigate. For example, if an investigator wants to study emotional instability, he/she does not place children in a situation where all factors are kept constant except one variable which is manipulated to determine what causes a particular type of emotional disturbance. Rather, he/she chooses children who according to as elected criterion are ‘disturbed’ and compares them with emotionally stable children. After searching for factors or conditions which seem to be associated with one group and not the other, he/she may present a possible explanation of the underlying causes of the emotional problem.

Limitations of causal-comparative method

- i) Lack of control is serious limitation and weakness of this method of research.
- ii) It is usually difficult to identify the relevant factors causing a particular condition or phenomenon. For instance, students' liking for a teacher depends on a number of factors and a researcher may not be able to identify all the factors. He/She may only be able to identify good teaching and mastery of subject matter as some of the factors effecting students' liking for a teacher.
- iii) The joint method of agreement and disagreement requires that a single factor must be the cause for the occurrence or non-occurrence of the phenomenon. But in the case of social phenomena, with which a researcher is usually concerned, this condition does not come invariably. In fact, in these situations/events usually have multiple rather than single causes. Furthermore, a phenomenon may result not only from multiple causes but also from one cause in one instance and from another cause in another instance.
- iv) When a relationship between variables is established, it is difficult to distinguish between the cause and the effect.
- v) The classification of subjects into dichotomous groups for the purpose of comparison also presents problems.
- vi) In comparative studies of natural situations, the researcher does not have the same control over the selection of subjects as he/she has in experimental studies. It is difficult to identify existing groups of subjects who are alike in all respects except for their exposure to one variable.

Though causal-comparative studies have many limitations, and they do not often produce precise and reliable knowledge that can be gained through rigorous experimental studies, they provide the means of tackling problems that cannot be probed in laboratory situations. Furthermore, they yield valuable information and clues concerning the nature of phenomena and are well suited to many types of field studies seeking to establish causal relationships.

Check Your Progress 2

Explain briefly the purpose of correlational studies. List the weaknesses of causal-comparative studies.

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

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6.3 EXPERIMENTAL RESEARCH

Experimental research studies are designed for establishing causal relationships. This method begins with a question concerning the relationship between two or more variables. At the same time, the researcher advances one or more hypotheses stating the nature of the expected relationship. The experiment is the event planned and carried out by the researcher to gather evidence relevant to the hypotheses.

In its simplest form an experiment has three characteristics:

- i) an independent variable is manipulated,
- ii) all other variables except the independent variable are held constant, and
- iii) the effect of the manipulation of the independent variable on the dependent variable is observed.

The independent variable and the dependent variable(s) are important in an experiment. The independent variable is manipulated or changed by the experimenter. The variable upon which the effects of changes are observed is called the dependent variable, which is observed but not manipulated by the experimenter. The dependent variable is so named because its value is hypothesized to depend upon, and vary with, the value of the independent variable. For example, to examine the effect of training for empowerment upon decision making, an investigator would manipulate training, the independent variable, by using different training methods in order to ascertain their effect upon decision making, the dependent variable.

6.3.1 Three Characteristics of Experimental Research

There are three essential ingredients in the conduct of an experiment: control, manipulation and observation. We shall discuss each of them as follows:

- i) **Control:** Control is the first essential ingredient of experimental method. Without control, it is impossible to evaluate unambiguously the effects of an independent variable. Basically, the experimental method rests upon two assumptions regarding variables. These are:
 - a) If two situations are equal in every respect except for a variable that is added to or deleted from one of the situations, any difference appearing between the two situations can be attributed to that variable. This statement is called the law of the single variable.
 - b) If two situations are not equal, and it can be demonstrated that none

of the variables is significant in producing the phenomenon under investigation, or if significant variables are made equal, then any difference occurring between the two situation after the introduction of a new variable to one of them can be attributed to the new variable. This statement is called the law of the only significant variable.

The main purpose of ‘control’ in an experiment is to arrange a situation in which the effect of variables can be measured. The conditions to be fulfilled under the first law can be obtained more easily in physical sciences. A high degree of control is much easier to achieve in a laboratory setting than in situation outside the laboratory. In the laboratory, there is only limited number of variables which can be manipulated easily. However, as social research is concerned with human beings, there are always many variables present in situation. To attempt to reduce social problems to the operation of a single variable is not only unrealistic but perhaps impossible as well. Fortunately, we do not require such rigorous control to be introduced in social settings, for many factors involved in such a setting may be quite insignificant and irrelevant for our study. To this extent, in social research, the law of the single significant variable is more appropriate. For example, if we were to study the effect of two methods of teaching alphabets to two groups of adult learners, we are likely to select the two groups which are identical in every respect except in the way they are taught alphabets. But it is impossible to have two groups that are identical in every respect. So, the endeavour of the researcher should be towards obtaining two groups that are as similar as possible, at least in those factors that are thought to have an effect on learning alphabets. These could be, general intelligence, motivation, reading ability, etc. Other variables that are not likely to affect achievement in learning alphabets can be ignored. Thus, in experimental studies in social research we need procedures that permit us to use to compare groups on the basis of significant variables. ‘Control’ is used to indicate an experimenter’s ‘procedures’ for eliminating the differential effects of all variables extraneous to the purpose of the study. (An extraneous variable is variable that is not related to the purpose of the study but may affect the dependent variable). The experimenter exercises controls, for instances, when the groups are made comparable on extraneous variables that are related to the dependent variable. If a variable is known to be unrelated to the dependent variable, it cannot influence the dependent variable and we do not need to control it for its effects.

- ii) **Manipulation:** Manipulation of a variable is another distinguishing characteristic of experimental research. It refers to a deliberate operation performed by the researcher. In contrast to the descriptive research in which the researcher simply observes conditions as they occur naturally, the researcher in the experimental research actually sets the stage for the

occurrence of the factors whose performance is to be studied under conditions where all other factors are controlled or eliminated. In social research and other behavioural sciences, the manipulation of a variable takes a characteristic form in which the experimenter imposes a predetermined set of varied conditions on the subjects. This set of varied conditions is referred to as the independent variable; the experimental variable, or the treatment variable. Then, different conditions are designed to represent two or more values of the independent variable; these may be differences in degree or differences in kind. That is, the independent variable may assume two or more values and the difference in the values may be of quantitative or qualitative nature. Methods of teaching, attitudes, socio-economic status, personality characteristics, types of motivation, etc. are some common examples of the independent variable in social research. For example, if the researcher compares two methods of teaching, then method of teaching is the independent variable and can be manipulated by the teacher. We may manipulate a single variable or a number of variables simultaneously.

iii) Observation: In experimentation, we are interested in the effect of the manipulation of the independent variable on a dependent variable. Observations are made with respect to some characteristics of the behaviour of the subjects employed in the research. These observations which are quantitative in nature may constitute the dependent variable. This needs some explanation.

The dependent variable in social research is often changing of some type, such as attitude towards learning. We are often interested in explaining or predicting attitude. Since attitude cannot be measured directly, we can only estimate it through measures like scores in a scale. Therefore, strictly speaking, the dependent variable is scores or observations rather than change in attitude.

Check Your Progress 3

Explain briefly the significance of control, manipulation, and observation in an experimental study.

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

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6.3.2 Steps Involved in Experimental Research

A number of steps are involved in experimental research. Here, we shall talk about four steps to reach the stage of the 'actual experiment'. Brief explanations are needed for steps 3 and 4 only. The steps are:

- i) Surveying the literature related to the problem,
- ii) Identifying and defining the problem,
- iii) Formulating hypotheses is an important step in experimental research. They suggest that an antecedent condition or phenomenon (independent variable) is related to the occurrence of another condition, phenomenon, event, or effect (dependent variable). To test a hypothesis, the experimenter attempts to control all the conditions except the independent variable which he/she manipulates. Then he/she observes the effect on the dependent variable presumably because of the exposure to the independent variable.
- iv) Constructing an experimental plan is the next step in experimental research. This refers to the conceptual framework within which the experiment is conducted. This would involve:
 - Selecting a research design,
 - Selecting a sample of subjects to represent a given population, assign subjects to groups, and assign experimental treatments to the groups. (Subject implies the respondent or living organism that is studied),
 - Selecting or constructing and validating instruments to measure the outcomes of the experiment,
 - Stating the procedures for collecting the data and possibly conduct a pilot or "trial run" test to perfect the instruments or design, and
 - Stating the statistical or null hypothesis.

The above steps bring the researcher to the stage when he/she actually conducts the experiment, applies statistical measures to the data obtained, and then test the significance of the results.

In the next sub-section, we shall take up the various designs involved in experimental method.

6.3.3 Designs of Experimental Study

A research design is very important for the researcher. A well developed design provides the structure and strategy to control the investigation and extract dependable answers to the questions raised by the problem or hypothesis. It is the nature of the problem that determines the appropriateness of the design.

Before we discuss the experimental designs, it will be relevant to look into the terms and symbols which we shall make use of.

- i) X represents the independent variable, which is manipulated by the researcher; it is also referred to as the experimental variable or the treatment variable.
- ii) Y represents the measure of the dependent variable. Y1 represents the dependent variable before the manipulation of the independent variable X; it is usually a pre-test of some type administered before the experimental treatment. Y2 represents the dependent variable after the manipulation of the independent variable X; it is usually a post-test administered to subjects after the experimental treatment.
- iii) S represents the subject or respondent used in the experiment.
- iv) E group refers to the experimental group – the group that is given the independent variable treatment.
- v) C group refers to the control group – the group that does not receive the experimental treatment.
- vi) R indicates random assignment of subjects to the experimental groups and the random assignment of treatments to the groups.

There is a large number of experimental designs. Various authors have classified experimental design into certain categories. Most common categorization comprises:

- Pre-experimental Design
- True Experimental Design
- Quasi Experimental Design

Some authors like Donald Ary and others (1985) have added more categories namely

- Factorial Design
- Time Series

Various designs under the above mentioned categories are given in the table below:

Pre- Experimental	True Experimental	Quasi Experimental	Factorial Design	Time Series
• One Group Pre-test Post-test Design • Static Group Comparison	• Randomized 'Subjects' Post-test only Control Group Design	• Non-randomized Control Group, Pre-test Posttest Design	• Simple Factorial Design	• One Group Time Series Design • Control

	• Randomized Matched Subjects, Post-test only Control Group Design • Randomized subjects Pre-test Post-test control Group Design • Solomon Four Group Design	• Counter Balanced Design		Group Time Series Design
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However, in this section, we will bring before you only a few most frequently used designs, from each of the five categories.

6.3.3.1 Pre-experimental Design

The two designs classified as pre-experimental designs offer minimal control of extraneous variables. Still they are used quite often in social research. These designs help to illustrate the advantages of more rigorously controlled designs that are presented later.

Design 1: One Group Pre-test Post-test Design

When this design is employed, the dependent variable is measured before the independent variable or treatment is applied or withdrawn, and then measured yet again. The one group design usually involves three steps:

- administering a pre-test measuring the dependent variable,
- applying the experimental treatment X to the subjects, and
- administering a post-test again measuring the dependent variable.

Differences attributed to application of experimental treatment are then determined by comparing the pre-test and post-test scores.

Pre-Test	Independent Variable	Post-Test
Y_1	X	Y_2

Design 1: One Group Pre-test Post-test Design

To illustrate the use of this design, let us assume that we want to evaluate the effectiveness of a particular self-instructional material in Rural Development

for post graduate students. How may we go about this task?

At the beginning of the academic year, the students are given a standardized test that measures the objectives of the course quite satisfactorily, following which the distance teacher then introduces the self-instructional material. At the end of the year, the students are administered the standardized test a second time. Comparing the scores of the two tests would reveal what difference the exposure to the SIM has made.

However, using only one group, as in Design 1, gives us superficial control. The major limitation of the one-group design is that, since no control group is used, the experimenter cannot assume that the change between the pre-test and the post-test scores is brought about by the experimental treatment alone. It is quite possible that some extraneous variables account for all or part of the change. For example, students experience changes with the passage of time; they grow mentally as well as physically, or they may acquire additional learning experiences that would affect the dependent variable. This extraneous variable can be thought of as maturation i.e., with the passage of time students get maturity and this in turn may effect achievement level. Another type of extraneous variable that can operate between the pre-test and the post-test scores and which cannot be controlled is history. History as a source of extraneous variances refers to the specific events that can occur between the pre-test and post-test other than the experimental treatment. In the example cited above, not receiving material regularly or illness just before the test, could decrease achievement scores. Similarly, a crucial research finding in history could increase widespread interest and hence affect the test scores. In fact, history and maturation become increasingly influential sources of extraneous variance when the time interval between Y1 and Y2 is long.

Another short coming of Design 1 is that it offers no way of assessing the effect of the pre-test Y1 itself. We know that “practice effect” exists when subjects take a test a second time or take an alternate form of the test. In other words, subjects do better the second time even without any instruction or relevant discussion during the interval. This is true not only for achievement and intelligence tests but also for personality tests. In the case of personality tests, a tendency towards better adjustment is generally observed.

To sum up, Design 1 has little to recommend it; without a control group to make a comparison possible, the results obtained in a one group design are basically un-interpretable. The results of the experiment would have been dependable if there could be a comparable group i.e. control group to which SIM had not been given.

Design 2: Static Group Comparison

Design 2 utilizes two or more groups, only one of which is exposed to experimental treatment. The groups are assumed to be equivalent in all relevant aspects they differ only in their exposure to X.

This design is often used in social research. For example, achievement of adult learners taught by a new method is compared with that of similar class taught by a traditional method. Design 2 has a control group or groups, which permit (s) the comparison that is required for scientific respectability. If the experimental group is superior on the Y_2 measure, the researcher then has more confidence in his/her conclusion that the difference is due to experimental treatment.

However, there is a basic flaw in this design. Since neither randomization nor even matching is used to assign subjects to the experimental and control groups, we cannot be sure that the groups are equivalent prior to the experimental and control groups, we cannot be sure that the groups are equivalent prior to the experimental treatment. They may differ on certain relevant variables, and it may be these differences rather than X that are responsible for the observed change. Because we cannot be sure that the groups are equal with regard to all the factors that may influence the dependent variable, this design is considered to be lacking in the necessary control and must be classified as pre-experimental.

Group	Independent Variable	Post-Test
E	X	Y_2
C	---	Y_2

Design 2: Static Group Comparison

6.3.3.2 True Experimental Designs

The following two designs belong to the 'true experimental' design, because of the control that they provide. i.e.

- i) Random assignment of subjects to the groups.
- ii) Random assignment of treatment to the groups.
- iii) Post-testing all the groups.

Design 3: Randomized Subjects, Post-test only Control Group Design

This particular design requires two groups to which subjects are randomly assigned and each group is assigned to a different condition. No pre-test is used; randomization controls all the possible extraneous variables. This does not mean that randomization procedures (like drawing names out of a hat, or flipping a coin) remove the extraneous variables, such as the IQ or age, which may affect the dependent variable, or control their presence. These extraneous variables still affect the inquiry; but, now, it is the laws of chance

rather than the personal feature of E that operates. In fact, the larger the number of subjects used the more equivalent or similar the groups will tend to be. Suppose a researcher wants to study the effect of instructional material on achievement in a course during a contact programme. He/she may randomly assign the students to the groups and provide treatment to one of the groups. The assigning of the treatment will be random. At the end of the contact programme he/she may test both the groups.

After the subjects are assigned to the groups, only the experimental group is exposed to the experimental treatment. Otherwise, in all other respects, the two groups remain similar. Members of both groups are then measured on dependent variable Y_2 . Scores are then compared to determine the effect of X.

Group	Independent Variable	Post-Test
(R) E	X	Y_2
(R) C	----	Y_2

Design 3: Randomized Subjects, Post-test only Control Group Design

The main advantage of Design 3 is randomization, which assures statistical equivalence of the groups prior to the introduction of independent variable. Design 3 provides controls for the main effects of history, maturation and pre-testing; because no pre-test is used, there can be no interaction effect of pre-test and X(treatment).

Design 4: Randomized Matched Subjects, Post-test only Control Group Design

This design is similar to Design 3 except that it uses a matching technique, rather than random assignment, to obtain equivalent groups. Subjects are matched on one or more variables that can be measured conveniently, such as IQ or reading scores. The matching variables used are generally those that have a significant correlation with the dependent variable. On the basis of these variables subjects are paired so that opposite member's/scores' are as close as possible; and then, one member of each pair is randomly assigned to one treatment and the other to the second treatment.

Group	Independent Variable	Post-Test
(Mr) E	X	Y_2
(Mr) C	----	Y_2

Design 4: Randomized Matched Subjects, Post-test only Control Group Design

Matching is most useful in studies where small samples are to be used and where Design 3 is not appropriate. Also, the matched subjects' design serves to reduce the extent to which experimental differences can be accounted for by initial differences between groups. However, for matching to really become a means of control, the matching of all the potential subjects must be complete, and assignment of the members of each pair to the groups must be determined randomly. If one or more subjects should be excluded because an appropriate match could not be found, this would bias the sample. When using Design 4, it is essential to match every subject, even if only approximately, before random assignment is effected.

6.3.3.3 Quasi Experimental Design

One of the Quasi Experimental Designs is Non-randomized Control Group, Pre-test Post-test Design. You would notice that randomized control group pre-test post-test design is a true experimental design which we have presented before. The only difference on the quasi experimental design is that the groups are not randomized. Hence they are unlikely to be comparable. In fact, it is on this ground that the design becomes quasi experimental and not true experimental. Since the rest of the design related characteristics remain common with the randomized control group pre-test post-test design of the true experimental design category, we do not need to provide any further details on this design.

Group	Pre-test	Independent Variable	Post-Test
E	Y_1	X	Y_2
C	Y_1	---	Y_2

6.3.3.4 Factorial Designs

A factorial design is one where two or more variables are manipulated simultaneously in order to study the independent effect of each variable on the dependent variable as well as the effects due to interaction among the several variables. Factorial designs are of two types. In the first type, one of the independent variables may be experimentally manipulated. The researcher is primarily interested in the effect of a single independent variable but he/she must take other variables into consideration which may influence the dependent variables. In the second type of design, all the independent variables may be experimentally manipulated. Factorial designs have been developed at varying levels of complexity, the simplest factorial design is the 2 by 2 (2×2) Design. The two independent variables have two values.

Level 1 subjects receive Treatment A and others Treatment B. Some level 2 subjects receive Treatment A and others Treatment B.

Attribute Variable X_2	Experimental Variable X_1	Variable X_2
	Treatment A	Treatment B
Level 1	Cell 1	Cell 3
Level 2	Cell 2	Cell 4

The strength of the factorial design is that it can achieve in one experiment what might otherwise require two or more separate studies.

6.3.3.5 Time Series Design

We have already discussed pre-test post-test designs. They generate one time data on the dependent variable before and after the experimental treatment. There are instances where it becomes necessary to compare changes in the trend of a particular phenomenon or process or product. For example, let us assume that learners behaviour to attitudes, achievements etc. changes over a period of time. If a specific treatment is introduced in an institution to study the change in attitude or achievement it is useful to study the trend through measurement at certain intervals before the introduction of the treatment. Instead of onetime pre-test, the test is repeated three or four times before the treatment is administered. This generates data on the trend of behaviour. Similarly after the treatment is administered instead of one time post-test, the post-test is administered several times at intervals. This provides data to derive the trend in the change in behaviour. Since both, pre-tests and post-tests are used over a time series design the effect of the treatment on the dependent variable is tested by comparing the trends. This can be represented in the following form:

Y_1	Y_2	Y_3	Y_4	Y	Y_5	Y_6	Y_7	Y_8
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What we have described above is one group time series design. If you add a control group and repeat the same time series measurement without the treatment of the control groups it becomes control group time series design. Similarly control group time series design is represented as:

Group									
E	Y1		Y2		Y3	Y4	X	Y5	Y6
	Y7	Y8							
C	Y1	Y2	Y3	Y4	X	Y5	Y6	Y7	Y8

Check Your Progress 4

Draw and compare the figures representing pre-test post-test experimental design and one group time series design.

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this unit

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6.4 LET US SUM UP

In this Unit, we studied two important research methods, viz., Descriptive Method and Experimental Method. Descriptive research describes what is the condition and involves the description, recording, analysis and interpretation of conditions that exist. We also studied various types of descriptive research, like survey, documentary analysis, correlational and causal comparative studies. Experimental research describes what will be when certain variables are carefully controlled or manipulated.

6.5 CHECK YOUR PROGRESS: THE KEY

1) The steps involved in survey studies are: selecting the topic, sampling, selection/construction of tools of data collection, collection of data, processing of the data and analysis and interpretation of data.

Documentary analysis can show us the existing conditions and practices of an institution and the importance of problems in an organisation.

2) Correlational studies are useful to:

- determine the relationship between variables and
- measure the extent to which variations in one variable are associated with the variations in another variable. The weaknesses of causal comparative studies are: lack of control, difficulty in identifying the relevant causal factors, determining their number in given phenomenon, classifying subjects into dichotomous groups for the purpose of comparison, lack of control over the selection of subjects.

3) Control is crucial to (i) evaluate unambiguously the effects of an independent variable and (ii) arrange a situation in which the effect of variables can be measured.

Manipulation controls or eliminates the irrelevant factors and arranges a

situation in which only relevant factors can be studied.

Observations are made to study specific characteristics in the behaviour of the subjects employed in experimental research.

4) Pre-test Post-test Experimental Design

Group	Pre-test	Treatment	Post-Test
E	Y ₁	X	Y ₂

One Group Time Series Design

Y ₁	Y ₂	Y ₃	Y ₄	Y	Y ₅	Y ₆	Y ₇	Y ₈
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Compared to one test each before and after the treatment in pre-test post-test experimental group design, tests are repeated at specified intervals in one group time series design. Whereas time series designs compares the trends of change in the dependent variable, the pre-test post-test experimental design tests one time gain or change in the dependent variable.

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UNIT 7 EVALUATION AND ACTION RESEARCH

Structure

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7.0 INTRODUCTION

Government/Non-government development organizations undertake many developmental programmes and provide services to individuals, groups and communities. While they provide the services they are constantly concerned about the outcome of their services: Do they achieve their goals while providing services? A set of questions are raised: Are the services effective? Are these programmes leading to undesirable consequences? Are the services relevant? Will these services achieve their introduced goals? And many such questions puzzle agency administrators. As such they need some reliable valid data which can give answers to these questions. Moreover these services are funded by various sources, it could be a government agency or it could be non-governmental, national or international funding organizations.

Whoever may be the funding organizations, they insist on some reliable, evident assessment whether the funds are being effectively utilized in general and whether the introduced goals are being achieved. To get the answers we use a method of research called evaluation research. While implementing programmes / services many problems crop up, such as, the target beneficiaries do not show interest in the programmes, they do not cooperate with the implementing authorities etc. Action research, another method of research, intends to solve such problems through planned intervention. We shall look into both evaluation research and action research in some detail in this Unit.

7.1 OBJECTIVES

After the completion of this Unit you should be able to:

- describe the concepts of evaluation research;
- state the purpose of evaluation research;
- differentiate between evaluation and basic research;
- describe the models of evaluation research;
- explain the various types of evaluation research;
- describe the various evaluation research designs;
- describe action research and its various stages; and
- compare action research with applied research.

7.2 EVALUATION RESEARCH

In a very broad sense, the concept of evaluation research simply connotes use of research methods to evaluate programmes or services and determine how effectively they are achieving their goals. The terms like evaluation research, evaluative research, programme evaluations and evaluation are synonymous, interrelated and hence used interchangeably.

All the programmes undertaken are to be evaluated for the results they have achieved or failed to achieve. Evaluation research provides objective assessment of the performance. It is indispensable as it provides the programme administrator with effective use of resources and of accountability for their use. It is now considered as an integral part of governmental as well as non-governmental organizations and is recognized as an important process to improve the working of organizations. Its chief function is to determine as systematically and objectively as possible the relevant effectiveness and impact of their objectives. As such, evaluation is an indispensable action oriented tool in the organizational process for improving both activities still in progress and future planning programming and decision making. It is also a process, which covers aspects relating to the accessibility, availability, and quality of the services and their utilization,

their relevance or appropriateness to local needs and expectations, viability of the consequences or impact of the programme.

7.2.1 Evaluation Research for Impact, Outcome and Efficiency

Evaluation of programme outcome and efficiency may assess whether the programme has effectively attained its goals, whether it has any unintended harmful effects, whether its success (if any) has been achieved at reasonable cost and how the ratio of its benefits to its costs compares with other programmes having similar objectives (Bhatt, 1984). This approach to evaluation research refers to the formal goals and mission of programme, whether it has achieved what the planners wanted to achieve. A development programme is designed to produce significant outputs/results of social change and social transformation. Based on these facts, it is believed that experimental designs are best suited for a precise assessment of the results. In other words the experimental designs should therefore be used wherever the essential conditions for organising it are available. These are basically measurements at two or more points in time (before, during and after the project period) in regard to both experimental groups (those who participated in the programme) and control groups (those outside the influence of the programme). In evaluation studies that used experimental designs a few used a substitute approach of experimental design. A very common characteristic of the studies is that the scope of most of the conclusions of the evaluations are usually emphasized at the expense of depth (Engstrom, 1970). The reports, one observes, are extensive rather than intensive and by and large, very informative regarding efforts in the area of social development.

7.2.2 Differences between Evaluation Research and Basic Research

Evaluation research differs from conventional social research already discussed in preceding Units. In a very broad sense evaluation researches are applied social research. By and large, conventional social research is concerned to add to our knowledge, test hypotheses, construction of theories and sometimes to find some practical application in the future. Social research, in general, and basic research, in particular, is carried on for its own sake. There may not be a practical purpose – to produce results that are, practical, and useful. Evaluation research is a special branch of applied research, designed to evaluate social programmes and projects, such as adult/non-formal education, welfare schemes, innovative intervention methods, healthcare delivery systems, job training programmes etc. The findings of evaluation research are not meant merely to add to our knowledge or construct theories. They are used to decide whether the programmes should continue as it is or with some modifications or be abandoned, whether budgets should be enhanced or reduced, whether staff should be hired or fired – all based on whether the programme achieved its intended goals.

Inevitable conflicts arise between programme directors or agency administrators whose careers depend upon implementing successful programmes and evaluation researchers whose careers require that they evaluate the programmes objectively. It is recommended that programme directors/administrators do adopt a positive attitude and accept evaluation findings from evaluators about whether the programmes they are directing/administering achieve the intended goal.

As it is carried out to evaluate ongoing programmes, evaluation research is designed with a shorter time span than basic research. The social problems are not solved immediately, but decisions about programmes are made immediately because budget allocations and personnel decisions are frequently based on demonstrable “results”. Laurence Lynn (1977) points out that “social problems are seldom solved by a single decisive act or policy declaration; rather, policies to deal with them are fashioned incrementally over time in a series of measures which are partial and not necessarily reversible” (Laurence Lynn, 1977, p.72). However, policymakers often have “short time horizons” and wish to see research results to justify continuing or terminating a program. The need for quick and definite answers makes most evaluation research different from basic research.

Although evaluation research is intended to produce immediate results and have an immediate impact, two circumstances often prevent this from happening. The first arises when results are equivocal or contradictory, so that it is not clear what the policy decision should be. There have been many evaluations of adult education, for instance, and they do not all agree about the programmes success or failure. Community Development Programmes have been evaluated many times in many places, and the results are contradictory. If the planners and policy makers are to use these evaluation results, which results should they use?

The second situation that prohibits use of the results of programme evaluation arises when the effects of social welfare programmes are not immediately visible. For instance, education was originally introduced to educate three and four-year-old children so that they would become achieving self-sufficient adults. However, educational planners are not prepared to wait for 15 or 20 years for an evaluation before they decide whether to continue with the early childhood education programmes. Instead, they use immediate outcomes; the children’s subsequent academic achievement in primary school – and assume that adult educational achievement will follow from childhood scholastic performance. There is positive but weak connection between the two.

7.2.3 Evaluation Research Models

Evaluation research has been undertaken on the following two models:

- i) Goal attainment model, and

ii) The system model.

The first model starts with taking into account the goals. This is followed by determination of measures of goals, collection of data and appraisal of the effect of the goals. Finally, the initial goals are modified in the light of the appraisal. The second model, on the other hand is concerned not only with goals and sub-goals but also the coordination of organizations sub-units, the execution and maintenance of necessary resources. Within the area of evaluation research, a wide range of evaluation strategies, each with distinctive features and each applicable to different research problem are available. However, all the evaluation researches can be grouped on the basis of goals of the study. These are:

- 1) Formative Evaluation Research.
- 2) Summative Evaluation Research.

7.2.3.1 Formative Evaluation Research

Formative evaluation research focuses on providing information to guide the planning, development and implementation of a specific programme. For initiating a programme, certain basic data are essential. First, it is necessary to have data on the personal and socio-economic characteristics of the target population. Second, it is important to be aware of existing services. Third the programme planners should have knowledge about intervention strategies. Finally it is necessary that it should be measurable. To get answers to this question formative researches are undertaken.

Formative evaluation research is usually qualitative research and uses case histories rather than statistics to make a judgment. As such, it uses participatory research techniques like observation.

7.2.3.2 Summative Evaluation Research

Summative evaluation research involves assessing the impact of a programme. The results of summative evaluation researches are basically used for policymaking or decision making, such as whether to continue, expand, or cancel a programme. Summative evaluation research examines the effects of a programme. It uses experimental, quasi-experimental and survey research designs. Summative evaluation research usually uses statistical analysis of quantitative data. Summative evaluations are used to decide whether programmes should continue or cease, and for this reason administrators may resist and evaluators find it difficult to implement summative evaluation.

Formative evaluation seems more desirable because it is used to help the agency administrators formulate their programme, review them, and improve them. Formative evaluation research provides feedback to the programme director about how the participants react to the programme, how the implementors are carrying out the programme, and whether the actual

programme is in line with the intended programme. They analyze the programme as it appears in action and describe how it works. This feedback is received during the initial stages of a programme, when it is still possible to change and improve – hence, the name formative evaluation research. By contrast, summative evaluation researches are most often carried out during the terminal phase of the programme.

7.3 TYPES OF EVALUATION RESEARCH BY EVALUATORS

Some researchers prefer to classify evaluation researches according to evaluators, i.e. the persons responsible for evaluation of the programme. Based on this classification, evaluation researches can be of three types:

- a) **Internal Evaluation:** In internal evaluation the personnel and the executive of the agency and the group participate. It is a continuous process, which is done at various points and in respect of various aspects of the programme/project activities. This is an approach to programme / project administration that involves fairly continuous self-evaluation by principal/director and participants, according to pre-established criteria related to the purpose and goal. Usually, this type of evaluation is included in the project plan during the design stage and given funding as part of the project.
- b) **External Evaluation:** Persons outside the agency do external evaluation. Funding organizations retain evaluators from outside the agency to evaluate the programme/project activities for the purpose of finding out how the money given is utilized by the agency. External evaluators are chosen basically for two reasons. The first reason arises from the fact that the ‘outsiders’ are assumed to be more objective or at least neutral. The second is to obtain specialists and experts in certain areas. They add fresh perspectives and thinking; they may possess expert technical knowledge and skills that are absolutely necessary for a thorough evaluation; and their presence in an evaluation team helps give evidence of impartiality and thus enhances the credibility of the results.
- c) **Joint Evaluation:** This type of evaluation involves external evaluators and one or more representatives of the agency. While joint evaluations are difficult, they can be very useful for training agency personnel and gaining their ownership of results.

Check Your Progress 1

Differentiate between Formative and Summative Evaluation.

Note:a) Space is given below for your answer.

- b) Compare your answer with the one given at the end of this unit

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7.4 TYPES OF EVALUATION RESEARCH BY THE TIMING OF EVALUATION

Another categorization of types of evaluation is based on the timing of the evaluation. These types of evaluations comprise a continuous process of evaluation through different points in the life of a project or programme. Three such evaluations are very common:

- a) **Appraisal Ex Ante:** This is a critical examination of the identification report (feasibility report), which selects and ranks the various solutions from the standpoints of relevance, technical, financial and institutional feasibility and socio-economic profitability.
- b) **Mid-term Evaluation:** This is an evaluation carried out during implementation. Its aim is to draw conclusions for administering the project/programme.
- c) **Ex-post Evaluation:** This is an evaluation of a completed programme/project. Its purpose is to study whether the programme/project objectives have been achieved. It also includes the lessons to be drawn for future improvement in a later phase or in a similar programme elsewhere.

7.5 EVALUATION RESEARCH DESIGNS

In general, any of the basic research designs, discussed in Unit 2 can be used for the purpose of evaluation research with some modifications. However, evaluation research often calls for testing of cause-effect relationship. As such, experimental designs are more appropriate for the purpose of evaluation research.

Further, true experimental designs use the process of randomization to control the validity threats that can lead to false causal inferences. Therefore, ideal approach to determine the effects of a programme, is randomized experiments. Though it sounds as the most appropriate research design for evaluation research, there are many practical difficulties in using randomized experimental research designs which compare experimental group with control group, in the areas of rural development. As a result, such experimental researches are considered inappropriate or impossible to conduct in rural development settings. It was often too time-consuming and expensive to identify beneficiaries with similar problems and randomly assign some to treatment and others to control groups.

Another problem about conventional experimental researches was that of the complicated pre-conditions and assumptions of statistical analysis of data, which essentially require complying with probability theory of sampling, which is certainly a difficult if not absurd proposition for social researchers.

Finally, the use of control groups, to whom intervention is withheld, has been a source of ethical concern to social work professionals. Thus, although conventional experimental researches are appropriate for some purposes, the drawbacks associated with the method have led social work researchers to find an alternative approach for evaluating the effects of social work interventions and modify and update intervention techniques.

The evaluation research designs consist of organization of measures to demonstrate achievement or non-achievement of intended effects of the programme/project. Designing evaluation studies also give credible objective measurement of development, change and impact. The choice of the evaluation design determines the degree of confidence that can be placed in the results of the evaluation. Various evaluation designs need to be examined and considered according to their ability to distinguish the affects of the programme/projects from other possible effects not related to the programme/project. These evaluation designs may be set out as follows:

7.5.1 The After-Only Evaluation Design without a Control Group

In this study design, the measurements are limited to the target group and taken only once at some point of time after completion of the programme/project activities. This is by far the weakest evaluation design. It is difficult to know whether any change has occurred or to assess the degree to which the changes, if any, can be attributed to the programme/project implementation.

7.5.2 The After-Only Evaluation Design with a Control Group

In this design a group (control) similar to the group (experimental) for which programme/project activities have been implemented is selected. Both the groups are measured with respect to the dependent variable only after completion of the programme/project activities.

The major weakness of this design is that the 'before' measurements are not taken. Both the groups are assumed to be similar in respect of the 'before' measures on the dependent variable. Hence, it is quite likely that the change in the dependent variable may really be due to the initial differences between the two groups.

7.5.3 The 'Before'- 'After' Evaluation Design without Control Group

This design involves two measurements on the target/treatment group; one

before the implementation of the programme/project and another after the completion of the programme/project. The difference between the target group's position on the dependent variable (the effect of the programme) is taken as a measure of the effect of the program (dependent variable). But it is obvious that external factors unrelated to the programme treatment have been in operation leading to a change in 'before' target group's position on the dependent variable. The 'before' measurement itself may change the dependent variable. Thus, the major weakness of this evaluation study design is that it does not distinguish the effects of the programme activities and effects of external factors or developmental process.

7.5.4 The 'Before' - 'After' Evaluation Design with Control Group

This study design may involve one, two or more control groups similar in characteristics where the programme is not being implemented. The variations in control groups arrangements relate to the attempts to take account of extraneous events, maturational or natural developmental process and the effects of 'before' measurement. In this design of study, both the target group and control group are measured at the beginning and also at the end of the programme/project activities alone.

7.5.5 The Ex-Post-Facto Evaluation Research Design

The ex-post-facto study design is an attempt to detect causal relationships with data gathered by survey. Here, the evaluator controls the crucial variables only by selecting one, which has already been recorded. For example, an agency has conducted an opinion survey of adult beneficiaries aged 25 or more, taking their age, gender, place of birth and so on. The Agency authorities are interested in the causal effect of place of birth (the independent variable) on respondent's opinion on the effectiveness of the programme of non-formal education (dependent variable). Through manipulation of data the evaluator achieves some control over the other dependent variable (opinion) and the independent variable (birthplace).

In the ex-post-facto design the evaluator does not have very good control of causal variable, study condition, outside variables and measurement of dependent variable. The major drawback of this study design is that the data gathered by a survey is only a cross section taken at one point of time, but the casual relationship in question is the link between the person's birth place and his opinion. This is a casual chain that may be of over 25 years' duration and the environment in which the person lived during these years may have varied widely from subject to subject.

7.6 USE OF EVALUATION RESEARCH

The important uses of evaluation research are as follows:

- 1) To determine the effectiveness of the programme.

- 2) To answer whether the programme is relevant in the light of the objectives.
- 3) To assess whether the intervention is effective.
- 4) To assess the effect of alternative/innovative interventions.
- 5) To enhance the quality of activities/programme
- 6) To determine whether a programme has consequences that is either desirable or undesirable.
- 7) To justify and define the programme in cost effective terms for funding organizations.

Check Your Progress 2

Explain various types of evaluation research designs. Describe briefly the uses of evaluation research.

Note:a) Space is given below for your answer.

- b) Compare your answer with the one given at the end of this unit

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7.7 ACTION RESEARCH

Many authors have pointed out the contradiction between the words and implied meanings of 'action' and 'research'. Action is a here and now activity whereas research is a planned, future-oriented activity. Research is preceded by careful planning for application of sophisticated methodology for generating knowledge that can be generalized. Action is temporal and intended to achieve immediate results without any agenda of generating generalizable knowledge. Whatever the strength of this argument, this contradiction is only apparent. Action research is a well-developed research technique; it is also widely used in various sectors including rural development.

It is difficult to define action research; indeed, the meaning is implied in the two words. Super-imposing relevant research methods and processes over action that is here and now is the main intention of action research as a means of solving problems. In other words, action research is research intended to solve practical problems of an individual or a group or an institution through planned intervention. Here, the emphasis lies on solving problems through adoption of alternative practices. Cohen and Manion described action

research as, “a small-scale intervention in the functioning of the real world and a close examination of the effects of such intervention”. On the basis of analyses of a number of action research cases, it becomes evident that it is

- Situational – it emerges out of situational needs and a solution is also designed with respect to the situation,
- Collaborative and participatory – although individuals can carry out action research individually, it is increasingly becoming a team work where practitioners collaborate and participate with other colleagues in the organization and with the researchers, and
- Self-evaluative – just as action research is self-initiated since it evolves out of the perception of problems by the practicing individual or group, it becomes self-evaluative where the action research team evaluates the outcome of the exercise.

7.7.1 Action Research Contrasted with Applied Research

The emphasis of action research on problem solving has been questioned as a topic of research itself. Nevertheless, almost all textbooks on research methodology provide separate treatment to action research, which indicates its acceptability and relevance. However, it is important to differentiate it with respect to other research methods and designs, particularly applied research. Obviously, if action research intends to solve problems through adoption of alternative practice and assessing its impact, it is not historical, philosophical or even survey type of research. It comes closer to experimental research, particularly, certain types of pre experimental designs. The major departure from applied research is on the very intent of the two types of research studies. Let us see the differences between applied research and action research against a few issues of research methodology (see the table below).

Table 1: Comparison of Applied and Action Research on Methodological Components

Research Methods	Applied Research	Action Research
Goals	Creation of new knowledge through generalization	Locale specific problem solving
Hypothesis	Often formulated on the basis of previous research and theoretical knowledge	Not necessary; can be formulated by informed guess of the practioners
Research Design	Sophisticated	Crude
Treatment	Usually, decided and designed well in	Interim review of the effect of treatment

	advance and not changed during the experiment	leads to modification of the treatment since emphasis is on problem solving
Variables	Carefully chosen and classified under categories like criterion, independent and intervening	Not an issue – whatever be the variables they are therein the problem situation
Sample	Randomized or representative	Whatever is available sampling is not an issue
Tests and Measurements	Necessary to check validity, reliability and objectivity; also relevance of norms where normative sampling is necessary	Tests, questionnaires, etc. designed by practitioner can be adequate; however, instruments with tested properties like validity, reliability etc. provide better information and feedback
Statistical Analysis of Data	Sophisticated techniques are used not only to assess the impact of the independent variables on the treatment but also to assess the impact of intervening variables	Crude analysis that provides adequate feedback to the problem solving efforts is adequate.

7.7.2 Partners in Action Research

There are at least three possible partners in action research. First, an individual development worker or an NGO or an administrator may undertake action research to solve his/her problems in a work situation. The second important possibility is that, a group of development researchers can undertake action research together where they have a common problem, like lack of awareness or motivation, etc. It is also possible that a group of administrators across institutions can undertake action research where they face a common problem. The third possibility is collaboration among practitioners – individual(s) or group(s). This collaborative action research brings the strength of the two or more types of solution arrived at. In this case, research may take a more sophisticated form than normally it does in action research.

This partnership issue in action research brings us to another dimension. How large an operation can action research be? Well, it depends upon the partner. If it is one individual carrying out a problem solving exercise, obviously, the campus of the action research will be small. When several researchers join on one problem, the research may cover an entire institution. Extending it further, when several administrators across institutions in a district or a state join hands to solve a problem, the research may cover several institutions.

7.7.3 Areas of Action Research

Action research can cover almost every area of activity of an institution. Let us see a sample list:

- 1) Evaluation procedures – evaluation of programmes and services, use of various techniques and tools of assessment, etc.
- 2) Staff development – in service staff development programmes, training, workgroups, workshop designing, etc.
- 3) Management and Administration – personnel management, information systems management of academic activities including evaluation, participatory management and team building, motivation, etc.
- 4) Behavioural changes – attitudes and values through specific scholastic and non-scholastic interventions of practices.

Thus, almost all areas have the potentiality of using action research for solving problems and for improvement of practices.

7.7.4 Stages of Action Research

There are four major stages in the conduct of action research. These stages are clearly demarcated. It can be a linear or spiraling process. Stage one comprises actual diagnosis of the problem. Often, the perceived problem is only symptomatic and not the real one. It becomes necessary to go deep into the problem through the symptoms to diagnose it clearly. Stage two is the planning stage where the treatment is designed and methods of assessing the impact are defined. Stage three is the actual implementation, collection and analysis of data to assess the change in the magnitude of the problem. Stage four is reflection. These four stages are discussed below:

Stage One – Diagnosis

- 1) Identification, evaluation and formulation of problems – diagnosing the problem on the basis of symptoms.
- 2) Preliminary discussions and negotiations among interested parties – specially important if the project is to be undertaken by more than one individual and in partnership with professional researchers.
- 3) Review of literature – though not in all cases, certain types of problem may call for reviewing research literature before articulating the problem.

- 4) Modification and redefinition of initial statement of problems – the discussion and negotiation of the stage two and review of related literature may warrant redefinition or refining the problem statement for the action research.

Stage Two – Planning the Intervention

- 5) Selection of research procedure – designing the intervention, sampling, administration, choice of material, and methods of evaluation.

Stage Three – Intervention and Impact Assessment

- 6) Implementation of the project – actually, carrying out the treatment designed on the sample as per the specifications arrived at step 5 above. This will also include collection of relevant data. In some cases action research may also call for base line information.
- 7) Interpretation of data – the data collected needs to be interpreted through minimal statistical or qualitative analysis so that the impact of the treatment on the alleviation of the problem can be assessed.

Stage Four – Reflection

- 8) Beyond the factual data base results is the role of reflection with the main purpose of interpreting the results – the why's and how's of the findings and reflecting on the onward destination. Although these stages are clearly demarcated, it is possible to interpret them in a linear sequence as well as in spiraling process. Wherever the purpose of a piece of action research is limited to solving 'a unique problem' that is not typical, it can afford a linear sequencing and research is over here and now. Each action research can lead to another level of excellence and performance in the selected area of development. In such areas, action research needs to be seen as a spiraling process.

Check Your Progress 3

What are the areas of action research? Explain the stages involved in action research.

Note:a) Space is given below for your answer.

- b) Compare your answer with the one given at the end of this unit

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7.8 LET US SUM UP

In this Unit, we studied two important research methods, viz., Evaluation Research and Action Research. Evaluation research provides objective assessment of programme and services. Its purpose is to assess the utility of social interventions and human service programmes. Evaluation research uses research designs, methods and techniques to plan social intervention programmes, monitor the implementation of programmes and to determine how effectively programmes achieve their goals. Action Research intends to solve practical problems of an individual or a group or an institution through planned intervention. Here, the emphasis lies on solving problems through adoption of alternative practices.

7.9 CHECK YOUR PROGRESS: THEY KEY

- 1) Formative evaluation sources on providing information to guide the planning. Summative evaluation involves assessing the impact of the programme. Formative evaluation research is goalative research whereas summative evaluation on research uses statistical analysis of quantitative data.
- 2) The important uses of evaluation research are as follows:
 - a) To determine the effectiveness of the programme.
 - b) To answer whether the programme is relevant in the light of the objectives.
 - c) To assess whether the intervention is effective.
 - d) To assess the effect of alternative/innovative interventions.
 - e) To enhance the quality of activities/programme
 - f) To determine whether a programme has consequences that are either desirable or undesirable.
 - g) To justify and define the programme in cost effective terms for funding organizations.

Some of the evaluation research designs are:

The After-Only Evaluation Design without a Control Group

The After-Only Evaluation Design with a Control Group

The 'Before' - 'After' Evaluation Design without Control Group

The 'Before' - 'After' Evaluation Design with Control Group

The Ex-Post-Facto Evaluation Research Design

- 3) Some of the areas of action research are:
 - a) Evaluation procedures – evaluation of programmes and services, use of various techniques and tools of assessment, etc.

- b) Staff development – in service staff development programmes, training, work groups, workshop designing, etc.
- c) Management and Administration – personnel management, information systems management of academic activities including evaluation, participatory management and team building, motivation, etc.
- d) Behavioural changes – attitudes and values through specific scholastic and non-scholastic interventions of practices.

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UNIT 8 RESEARCH, INQUIRY SURVEY AND CASE STUDY

Structure

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- 8.1 Objectives
- 8.2 Research Inquiry
 - 8.2.1 Defining Research Inquiry
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8.0 INTRODUCTION

This Unit is in continuation of our discussion of the methods of social research. We take up two more methods of research— survey method and case study method in this Unit. These methods have been taken up in addition to various aspects of research inquiry. Research inquiry denotes the investigation into the social phenomena which are existing but remain unknown the survey and case study methods are popular in even area of research, particularly sociology and anthropology. They are extensively used in research in social sciences. If a researcher is interested in studying the problems related with development of rural community, he/she may use these methods. The survey method covers much larger area of inquiry while the case study confined to intensive investigation concerned with pertinent aspects of a particular phenomenon. Survey is more extensive investigation. In case study the unit of investigation may be an individual or a group of individuals, of a community or specific aspect of a culture. A case study conducted on individuals may be linked with the processes of growth and development of a child, the behaviour of gifted children, psychoanalysis of a problem child, role of a leader in specific social movements, etc. We shall look into both the survey and case study methods in some detail in this Unit.

8.1 OBJECTIVES

On the completion of this Unit, you should be able to:

- explain the meaning of scientific inquiry, its methods and its nature.
- list the steps taken in research inquiry.
- explain the purpose, characteristics and procedure of survey method of research.
- describe the purpose, characteristics, and nature of case study method.
- explain the various steps taken in the case study method.

8.2 RESEARCH INQUIRY

Research inquiry is needed into the existing but unknown phenomena in order to enrich the understanding of human beings. It is a continuous process as if known and unknown phenomena exist in a continuous. The process of research inquiry is always on bringing the new facts into picture. In case the research inquiry stops, no social development can taken place and the process of development would become static. Research inquiry brings dynamism into the process and makes the society enlightened and knowledgeable. And, therefore, for the growth and development of the society, particularly the rural and backward areas, researches are needed.

8.2.1 Defining Research Inquiry

It can be defined in the light of its focus which is concerned with the inquiry into the social fact which exists but remain unknown to the public. Research brings such social facts to light. Research can also be done on the social facts already searched and brought to light because of the dynamic character of social facts. Some aspects may be known but many other aspects may not be known, and therefore, further exploration is facilitated. Thus, research inquiry becomes an endless process of knowledge and development.

8.2.2 Method of Research Inquiry

There are various methods adopted during the conduct of research inquiry. The survey method and case studies are known methods of inquiry into social realities. Both these methods involve the identification and formulation of the problem according to their objectives, construction of hypothetical questions to be investigated, development of research designs according to their requirements, use of specific tools of data collection and the interpretation of data collected, and then making of reports based on the survey conducted and the case study undertaken. All the activities involved in these methods are interrelated.

Based on the data collected through these methods, more sophisticated methodological procedures can be adopted like the experimentation and

quantitative analysis but everything is governed by the objectives of research inquiry formulated. After the application of the two methods, research inquiry might stop but it can be taken up further depending on the all kind of social facts or variables discovered.

8.2.3 Nature of Research Inquiry

Scientifically speaking, the nature of such inquiry is always value-free but inquiry into the area of social science research is generally motivated by personal considerations as both the subject, as well as, the object are human beings dealing with human behavior.

However, in scientific research inquiry, the researcher is always expected to be objective and free from his/her own attachment. Thus, research inquiry is characterized by its objectivity and value-neutrality. This is the most important characteristic of any research inquiry. In other words, the inherent nature of such inquiry is its objectivity, as well as, originality. Although, these days researches are mostly reproductive in nature.

8.3 SURVEY METHOD

Survey and case are the two ways of conducting research inquiry. Survey method as mentioned is an extensive procedure of research inquiry to bring out data at a much larger scale. The best example of the use of survey method is the census, which consists of data about the characteristics of population at a large scale. Thus, the sample size taken up for the survey is much larger. All sample surveys apply survey method of collecting information. The national health and family welfare also applies survey method to collect demographic data. There are different types of survey like the census survey, opinion survey or the survey of public opinion during the election time, etc.

8.3.1 Purpose of Survey Method

One of the important purposes or objectives of survey method is to make broad generalization based on public opinion or on the basis of the characteristics of population but in this method there is no intension of specific theorization of facts. The simple objective of this method is to bring out necessary facts to light at the macro level, covering larger section or region of a unit of inquiry.

8.3.2 Characteristics of Survey Method

It is characteristic by its extensive coverage of the universe. It is never a longitudinal study. It is horizontal in character, covering a larger space. It is the space-oriented method but in no case it is time-oriented. It is characterized by larger size of sample and the space.

8.3.3 Procedures adopted in Survey Method

Since, the survey involves extensive coverage of the universe its procedure of data collection is mostly structure tools which can be mailed to the respondents to get necessary responses. If the survey is being conducted at the micro-level of opinion survey the possibility of using the interview and unstructured schedule at the tools cannot be ruled out but the survey is generally extensive, structured procedure of gathering information is a suitable tools.

Check Your Progress 1

Define research inquiry and explain it nature and method used.

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit

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4.2.3 Issues regarding Trustworthiness and Objectivity in Naturalistic Studies

Trustworthiness of findings: There have been attacks on naturalists on the issue of the trustworthiness in their process of inquiry. It is said that qualitative approaches may bring subjectivity into the inquiry, and the biases of the researcher may not produce authentic information for others. Moreover, because of subjective interaction, valid knowledge may not be generated. Naturalists have reacted to these objections with force and conviction.

In the recent past, there have been efforts to fix certain standards to check the trustworthiness of naturalistic inquiry. The criteria are outlined as follows:

- i) Credibility pertains to the level of agreement between researchers' data and the interpretations, and the multiple realities that exist in the minds of respondents.
- ii) Transferability is the quality that makes it possible to derive the accurate meaning of information on interpretation available in specific contexts.
- iii) Dependability is essentially the stability of information sought and interpretation derived in different situations on a specific issue.
- iv) Conformability refers to the possibility of studying the collected objective/systematic information and reaching similar/same conclusions by different researchers.

The naturalistic approach is guided by the following principles to enhance the credibility, transferability, dependability and conformability of the studies they lead to:

- a) Prolonged field work can enable one to overcome a variety of possible biases and wrong perceptions, which may appear in one short trip. Moreover, it can help us to identify the salient characteristics of the problem/programme under study.
- b) Persistent observation of certain typical meaningful features can increase the credibility of the study.
- c) Interaction with colleagues helps us evolve suitable designs, share the researcher's anxieties, apprehensions and feeling concerning field work and share with them the growing insights in the field.
- d) A variety of data sources using different investigators with different perspective scan project a consolidated picture of the field easily and can enhance the dependability and conformability of the data.
- e) Study of the varieties of adequate reference materials like documents, pictures, films, videotapes and audio recordings are essential for increasing trustworthiness of data.
- f) Crosschecking of data and interpretations by some of the respondents can enhance internal validity of the study.
- g) Increasing purposive sampling to collect different instances across a wide range of events can be useful in maximising the range of information and increasing external validity of information.
- h) Substantive description of events in specific contexts can be useful in establishing the reliability and dependability of information and conclusion.

Although the above checks are followed in naturalistic inquiry, there is no guarantee for the trustworthiness of a study. However, such checks can generate a convincing situation regarding the meaningfulness of the study. Unlike a long history of scientific inquiry which has established clear-cut standards for its trustworthiness, naturalistic inquiry has a very recent origin, and is yet to evolve suitable checks to enhance its trustworthiness and authenticity.

Problems of observation: The strength of naturalistic inquiry lies more in the competence of the field worker than the tools, techniques, and designs of data collection. There are several issues pertaining to the experience and expertise of the field worker, such as his/her relationship with the group being studied, the ethics involved in the processes of intensive data collection etc. We shall now touch upon some of these issues briefly as follows:

- a) First, it is necessary that only a researcher with a clear understanding of

the problem should take up the task of conducting a naturalistic study. Since the meaningfulness of the conduct of the study depends entirely on human approach, it is very important to see 'who' conducts the study and 'how' he/she proceeds with the study.

- b) There have been some problems in situations in which an outside researcher acts as a participant observer. In such cases, there is an apprehension that a stranger who is accepted as an observer may be deliberately informed and invited to observe just because he/she is a stranger. Strangers may notice events that contrast with their expectations. They may affect the behaviour of the group through their influence while assessing this group. The personality traits of the observers and the situations to be studied are the major factors in developing a close affinity between the scholar and the field and making him/her comfortable with the situations.
- c) The inside observer, i.e., a person from within the institution studied who now acts as an observer, may face major problems in the process of data collection. The group member who acts as an observer may confuse his/her role as an observer with that of a group member. He/she may get a biased picture about his/her group or the institution because of his/her personal/emotional involvement with the group. Then, there are ethical constraints too; they chiefly pertain to the confidentiality required within the group. For example, he/she may be denied access to certain situations or documents because he/she is one of the members of the group.

To sum up, the investigator needs a great deal of self-awareness and a thorough understanding of the group processes to make the process of naturalistic inquiry meaningful.

Check Your Progress 3

- i) State briefly, what measures you have to follow to ensure authenticity of data in naturalistic studies.

Note: a) Space is given below for your answers.

- b) Compare your answers with the one given at the end of this Unit

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- ii) What kinds of problem do you anticipate if you are to act a) as an internal observer to observe some of the activities of the institution where you work, and (b) to observe the activities of an outside institution as a participant observer?

Situation a)

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Situation b)

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8.3 CASE STUDY METHOD

Case studies of social institutions may include the study of different individual units like the family, a cultural organization, a social institution, a class or a developmental programme. In the case of studies on communities, a village, a tribe, a slum area or a culture, each can be considered a unit of investigation. Whatever the unit of a case study it is treated as a whole in the context of specific situations. The wholeness is determined through an abstraction of ideas. In one case, an individual's specific behaviour may be perceived as a totality; in another case, a situation consisting of group activities may be treated as a whole. Especially, in social situations, the units under investigation could be a whole developmental programme, a micro-credit system, instructional development in a group setting or in an 'individual setting', allowing the possibility of using a single method or integration of a number of methods.

8.3.1 Purposes of Case Studies

Usually, case studies are conducted for developing a deeper understanding about intricate relationships existing in the process-aspects of a specific unit/units through qualitative investigations. In this context, the case study method is not very different from the approaches of naturalists. So, many a time, the case study method is treated as a kind of naturalistic inquiry. For example, the functional aspects of any normal or exceptional institution may be the focus of a case study or any other approach used by the naturalists.

Case studies are conducted with a clinical purpose. They are treated as diagnostic and prognostic measures for clients' treatment. This approach has a psycho-therapeutic background. In social research, case studies are conducted for resolving different problems and bringing about improvement in institutions facing such problems.

There can be case studies of biographical type, which aim at giving an account of an individual or tracing the development of an institution, or a developmental programme through longitudinal and prolonged investigation.

8.3.2 Characteristics of Case Study Method

The procedural aspects of a full-fledged case study display certain specific characteristics, viz., and continuity in investigation, completeness, authenticity of data, confidential recording and intellectual synthesis. We shall explain each one of them briefly as follows:

- i) **Continuity in investigation:** Continuous and prolonged enquiry about the situations is necessary till the underlying factors are explored and plausible patterns of their interaction/relationship identified. For example, the problems underlying the communal harmony cannot be explored in one sitting. A researcher may have to undertake prolonged inquiries.
- ii) **Completeness:** A sound case study involves extensive collection of data concerning internal as well as external environment of the unit under study. Data collection continues till the completeness of data is ensured and a complete picture of the unit emerges.
- iii) **Authenticity of data:** A report of the case study must be based on meaningful, reliable and valid information regarding the case. Several qualitative and quantitative techniques such as interviews, observations, record surveys and administration of test questionnaires find their appropriate application in case studies. Use of multi-techniques approach to data collection and cross-examination of data through different techniques can take care of the authenticity of data. Moreover, since the researcher interacts with the typical situations personally, most of the ethical issues regarding the nature of data, the sample situations, or sample respondents, the nature of interactions etc., emerge during the investigation. These issues need to be dealt with care to make the case study ethically meaningful.
- iv) **Confidential recording:** The necessary data, involving personal and ethical issues like relationships of teachers and pupils with the management, discipline, confidential records, documents about the institution etc., must be handled tactfully and every care must be taken to maintain their secrecy.
- v) **Intellectual synthesis:** Since a case study involves multi method inquiry and deals with all significant situations concerning the unit, appropriate synthesis of the data is necessary to depict the uniqueness of the unit and to explore significant relationships. A skilled investigator with theoretical sophistication, insightfulness and writing skills can do justice and prepare a sound case study.

8.3.3 Steps in Case Study Method

Most researchers treat case study method as one of the forms of naturalistic inquiry. Therefore, the case study method follows the same steps as are followed in the case of naturalistic inquiry. However, the following steps are considered to be very significant.

- i) **Selection of a case for investigation:** The first step in any case study is the identification and selection of a case for investigation. It mostly depends on the basic questions of researcher, such as: am I interested in the study of a normal situation with a view to developing deeper insight in the phenomenon? Or am I determined to solve the problems of a typical institution? Or am I assigned the job of evaluating the functioning of an institution? Or am I interested in identifying the underlying factors contributing to the excellent performance of an institution? Once the case is identified, then one needs to determine the status of the case. For this, several pieces of preliminary information are collected about the background of the case through the already available sources. At this stage, the initial exercise in setting the course of research is done; it comprises the following:

- Demarcation of the relevant aspects of the case to be investigated;
- Preparation of a broad outline of the study of sample situations, and
- Preparation of the appropriate tools for collecting the 'benchmark' data about all the pertinent aspects of the case under study.

Answers to the questions would tell us whether we have identified the 'case' or not.

- ii) **Data collection:** Now we move on to the stage of data collection. In the process of collecting benchmark data about the case, we may make use of both qualitative as well as quantitative techniques like observations, interviews, check lists, proforma, open-ended questionnaires, record surveys, psychological tests, etc. every care must be taken to use the tools specifically relevant for the case. In most cases, the first round exploratory work is done through personal interaction with the situation under study.
- iii) **Analysis of first round data:** Through systematic analysis of the first round data, we can identify the more complicated situations or problems, and raise pertinent questions about the influential factors. In the case of clinical investigations, we can state various hypotheses about the solutions to the problems.
- iv) **Second round investigation:** The second round investigation is conducted for only those specific questions or factors which are identified through the analysis of the first round data. Intensive investigations about these specific issues/problems are conducted through prolonged observations, informal and formal interviews,

questionnaires, cross-examination of different documents and records, administration of specific tests etc. At the end of this second round of data collection, analysis and interpretation of data begin. However, during the interpretation of the data, if some more evidence is needed we may go for another round of data collection. Actually, in a case study, the process of data collection, its analysis and interpretation go on in cyclical order till satisfactory answers to the questions arising in the course of investigation are found and a clear cut picture of the case emerges through investigation. Most case studies aiming at understanding the dynamics of an educational/social unit stop at this stage.

- v) Follow-up: Investigations should be made regarding the effectiveness of the alternative measures introduced. Such investigations give us feedback on the strengths and weaknesses of the corrective measures. If we find them to be less effective, we should conduct further studies to arrive at some 'newer' remedial measures and apply them to the case.

Check Your Progress 4

Explain briefly the purpose and characteristics of case study method.

Note: a) Space is given below for your answer.

- b) Compare your answer with the one given at the end of this Unit

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8.3.4 Scientific Nature of Case Study Method

There have been criticisms against the case study method for lack of scientific approach. One criticism is that the case study method is useful in the exploration of knowledge related to a single unit, but it does not have scope to test hypotheses or confirm any evidence.

However, this limitation of the case study method cannot undermine its meaningfulness in the process of generating knowledge. Even though the case study method is viewed as a kind of naturalistic inquiry, this method accommodates the process of hypothesizing in a manner different from that of the survey and the experiment methods.

- i) **Generating hypothesis in the case study method:** Hypotheses in the case study method are generally found in the form of questions or statements related to the various aspects of the given aspects of the educational process which are tested or confirmed more qualitatively in

the given context of investigation. As stated earlier, while conducting a preliminary study on the unit, we may start with certain broad questions since we have limited experience of the case. Further, in the process of interaction with different educational situations, several statements may be generated for further verifications.

For instance, in an investigation of the classroom dynamics of an instructional system taken as a case, we may start with broad questions such as: what is interactional pattern in the class; and “how is it related to students’

achievement?” While observing the interactional pattern you may witness

a very high degree of cohesiveness among the group members and this could

induce you to think further regarding the factors related to the cohesiveness in the specific case leading to further questions.

ii) Testing hypotheses in the case study method: Testing hypotheses in case studies generally follow the qualitative approach, viz., the researcher’s insight into and impressionistic views about the process under investigation. However, the data processed in quantitative terms can be integrated with qualitative treatment for developing a holistic perspective regarding the case.

iii) Generalization of case study findings: Contributions of the case study method to the process of evidence-generalization depends on several considerations, viz., the nature of the case under study, the theoretical framework generated, and the extent of objectivity possible. An investigator approaching a case would primarily have the purpose of understanding that particular case in its entirety and, hence, he/she may not be concerned with extending his/her understanding to other cases. However, such an understanding may take the form of further hypotheses which could be tested through other investigations.

There are possibilities of considering the findings of a case which may be significantly similar to another case studied at a later stage. There are situations where studies of different cases can be useful in developing a new trend. For example, Piaget’s intensive studies on selective children have generated respectable generalization, but more generalizations may be possible from the findings of a large number of case studies, provided the researchers concerned come from similar background and have similar experiences, ideological commitments and interest in certain issues. Although the contribution of the case study to the generalization of findings seems to be neglected, its potential in contributing to theorization cannot be ignored by any insightful researcher.

Check Your Progress 5

Explain briefly the nature of case study method and the tools used for data collection in this method.

Note:a) Space is given below for your answer.

b) Compare your answer with the one given at the end of this Unit.

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8.4 LET US SUM UP

In this Unit, we have discussed research inquiry, survey and case study methods of research. We have focused the meaning and significance of these methods, their uses, characteristics steps involved in conducting studies.

- Research inquiry focuses on exploring the facts which are existing but remain unknown character.
- Survey method aims at broader understanding about the phenomena. It focuses on space. It is longitudinal
- Case study method aims at developing deeper understanding about a case. It focuses on time. It is longitudinal in character. A well-organised case study can generate further research inquiry.
- Both the survey and case study methods of research inquiry complement each other because from the data generated through these methods, further researches can be conducted.

8.5 CHECK YOUR PROGRESS: THE KEY

Major focus of research inquiry is to explore new facts which are existing yet remain unknown. The researcher inquiry is expected to be objective and follow scientific procedures of inquiry.

- 1) Major focus of the survey method of inquiry is to arrive at general understanding of the phenomena survey is space-based inquiry. It generates data on a much broader & larger scale.
- 2) Major focus of the case study method inquiry is to arrive at deeper understanding of a case under investigation. It is a time based inquiry. It is longitudinal in nature. It generates data at the micro level which can foster further research inquiry.

Check Your Progress 2

In the process of conducting naturalistic inquiry, what is the major focus of study; and how does a researcher conduct a naturalistic inquiry? Answer briefly in about 50 words.

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