
UNIT 1 INTRODUCTION TO RESEARCH: PURPOSE, NATURE AND SCOPE

Introduction to Research:
Purpose, Nature and Scope

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1.0 INTRODUCTION

Research is a process by which one acquires dependable and useful information about a phenomenon or a process. It may be broadly defined “as a systematic inquiry towards understanding a complex social phenomenon or a process”. It follows the scientific approach to gain knowledge. The most important characteristic of this approach is its thrust on objectivity. To what extent is the research using scientific approach is useful in studying the problems of society? How can we acquire reliable knowledge about the various aspects of human experience? To be

more specific how can the scientific approach be of value in understanding social phenomena? In this Unit we will discuss these questions. Our approach would be first, to understand the meaning of the terms 'research' and 'scientific research' then to examine the scientific method, its application in social sciences, its assumptions and finally to take a close look at the approach to find out how it can help rural development professionals to understand the problems of rural development.

1.1 OBJECTIVES

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

- explain the meaning and importance of research;
- state the purpose of research;
- describe the nature of research; and
- identify the areas of rural development in which research is being increasingly undertaken.

1.2 MEANING OF RESEARCH AND SCIENTIFIC RESEARCH

1.2.1 Research

When we observe certain objects or phenomena, we are often unaware of our biases, we do not question them and so we attribute our observations entirely to the objects or phenomena being observed. In this process, it is possible to arrive at right decision on the basis of wrong reasons or vice versa. This questions the process of observation. Was the observation error free? Every method of knowing has certain limitations. While observing are we aware of our limitations? Any study to create new knowledge or aims to increase existing fund of knowledge may it be through observation or by some other methods, is called research if it takes into account the biases, the errors and limitations. As such, research may be described as systematic and critical investigation of phenomena toward increasing the stream of knowledge.

Research in rural development is the application of research methods to the production of knowledge that rural development professionals need to solve problems they confront in the practice of rural development. The knowledge is useful in appraising the effectiveness of methods and techniques of rural development. It provides information that can be taken into consideration by development professionals prior to making decisions, that affect their clients, programmes, services or agencies such as use of alternative intervention techniques or change or modification of programme/client objectives and so forth.

Following are some of the examples where research methods are used in rural development:

- a community worker is interested in obtaining information about the actual or potential effectiveness of the individuals, couples or families in a rural community,
- a group worker wishes to assess the extent to which the technique of role play is more or less effective than group discussion in increasing knowledge of members of a self-help group;

- a community organiser wants to know the views of the community before he/she takes a decision to change the programme objectives;
- the director of a community welfare centre wants to know whether an income generation scheme is as effective as a self-help group in enhancing women's empowerment; and
- an administrator is concerned about effectiveness of implementation of new programme launched. These are some of the situations, which call for application of research methods and techniques in rural development.

Research offers an opportunity for all development professionals to make differences in their practice. There is no doubt about the fact that development professionals will be more effective practitioner guided by the findings of research. Research deals with those methods and issues, which are useful in evaluating programmes and practices.

1.2.2 Scientific Research

Science aims at description, explanation and understanding of various objects or phenomena in nature. Research is a special endeavour, which involves systematic and critical investigation towards increasing the stream of knowledge. Now it is easier to define scientific research. We may define scientific research as a “systematic and critical investigation about the natural phenomena to describe, explain and finally to understand the relations among them”.

Check Your Progress 1

Define the terms ‘research’ and ‘scientific research’. Illustrate your answer with examples from the area of rural development.

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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1.3 CONCEPTUAL FOUNDATIONS OF SCIENTIFIC RESEARCH

1.3.1 Facts and Theory

Social sciences primarily deal with human behaviour, which is, by and large, complex and dynamic in nature. One cannot, therefore investigate under guided conditions as

in natural and physical sciences. This creates many problems to the researcher such as the problems of subjectivity and individualistic generalisations etc.

Scientific research starts with facts and then moves towards theorising. To be useful, facts must be organised, and the primary purpose of the scientific method is to develop a mechanism of organising the facts, as they accumulate, and become meaningful from the standpoint of their objectives. Through empirical investigations, scientists gather many facts. As these facts accumulate, there is a need for integration, organisation, and classification in order to make the isolated findings meaningful.

When isolated facts are put in a perspective by integrating them into a conceptual scheme, which promote greater understanding, we approach the domain of science. When isolated facts are integrated into a conceptual scheme which promotes a better understanding of their nature and significance, it is clear that the facts have been already put in proper scientific perspective. Significant relationship in the data must be identified and explained. In other words, theories must be formulated. Theory may be defined as “a set of interrelated constructs (concepts), definitions and propositions that present a systematic view of a phenomena by specifying relations among variables, with the purpose of predicting and explaining the phenomena (Kerlinger, 1973).

Theory knits together the results of observations, enabling scientists to make general statements about variables and relationships among variables. For example, in Boyle’s Law, a familiar generalisation summarises the observed effects of change(s) in temperature on the volumes of all gases by the statements – “When pressure is held constant, as a temperature of a gas increases, its volume is increased and as a temperature of a gas is decreased its volume is decreased”. This statement of theory not only summarises previous information, but also predicts other phenomena by telling us what to expect of any gas under any change(s) in temperature.

Just as fact underlies theory, theories underlie facts – each raising the other like a spiral to an increasingly precise scientific formulation. Facts derive their significance from theoretical framework into which they bring facts into focus. This is well stated by Van Dalen (1973).

“....there is a constant and intricate relationship between facts and theory. Facts without theory or theory without facts lack significance. Facts take their significance from the theories which define, classify and predict them. Theories possess significance when they are built upon, classified, and tested by facts. Thus, the growth of science is dependent upon the accumulation of facts and the formulation of new or broader theories.”

This is particularly true in the early stages of scientific development, since in its early stage, research must confine its efforts to seeking answers to highly specific and particularised problems. In the later stage, it tends to strive towards unity by breaking down the very barriers that had made its earlier progress possible. Scientific theories attempt to organise the tiny, rigorously defined bits of knowledge into a more meaningful and realistic structure. This is precisely the function of theory.

1.3.2 Hypothesis and Theory

A hypothesis, when accepted, explains a small number of facts and the relationship between them. Generalisation, as the term denotes, is a hypothesis based on broader phenomena. Theory explains even more facts and their inter-relations. Theories themselves range from the simple to the more sophisticated. Finally there are laws, which have the greatest scope and generality.

In spite of the strong case that has been made for the role of theory in research, it will be appreciated that a theory has to be amended or abandoned when the discovery of new facts can no longer accommodate it. Alternatively, it may be subsumed by a wider, more embracing theory when it is realised that the situation which is contained by the theory is one instance of a more general case. Theories generated by the means that we have indicated, do not lead to 'eternal truth'; rather, they should be looked upon as useful conceptual frameworks which are adequate for present purpose or a given situation. Thus every theory is subject to modification as and when we get new facts and evidence that contradict the generalisations made earlier on.

1.3.3 Purpose of Theory

There are several purposes to be served by a theory in the development of science. We shall briefly consider three of them here. First, theory summarizes and puts in order the existing knowledge in a particular area. It permits deeper understanding of data and translates empirical findings into a more easily retainable and adaptable form. The theory of oxidation for instance, places into focus many of the chemical reactions common to everyday life.

Secondly, theory provides a provisional explanation for observed events and relationships. It identifies the variables that are related and the nature of their relationships. A theory of learning, for example, could explain the relationship between the speed and efficiency of learning and such other variables as motivation, reward and practice.

Lastly, theory permits the prediction of the occurrence of phenomena and enables the investigator to postulate and, eventually, to discover hitherto unknown phenomena. At the time when the 'Periodic Table' was being completed, for instance, certain gaps were noted in the sequence of the elements. Since theory provides that, there should have been no gaps, scientists were spurred on to look for the other missing elements. In time, these were found, anticipated by theory. Theory, therefore, stimulates the development of new knowledge by providing the lead for further inquiry.

1.3.4 Developing a Theory

It is important to stress that good theories are not born out of imagination, they do not originate merely through arm chair reflection. A theory is built upon collected facts. The investigator then searches, makes intelligent guesses as to how the facts are ordered, adds missing ideas or links, and puts forward a hypothesis; deduces what consequence should follow from the hypothesis and looks for further facts which are consistent or otherwise with the deductions; builds a wider generalisation or conceptual framework on more facts; and eventually outlines a theory. Theories are solidly based on evidence. And they are important practical tools which enable us to advance our knowledge still further. Once a theoretical framework has been elaborated we know what facts to look for to confirm or to deny the theory; also, we have a conceptual framework inside with which our evidence can be tested.

Theories always involve terms that refer to matters that cannot be directly observed. For example, gravity itself cannot be directly observed, though the effects of gravity can be. Gravity and gravitation are both theoretical terms. The terms of a theory or theoretical statement are sometimes referred to as constructs. Thus, many theories of learning refer to a motivational factor in behaviour. Now motivation is not directly observable. It is a theoretical term; or, we may refer to it as a construct. The term implies that it is a construction of the scientist's imagination.

Check Your Progress 2

Describe briefly the role of theory in scientific 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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1.4 SCIENTIFIC APPROACH

It is obvious that it would be impossible to comprehend the nature and content of research without an appreciation of a method. The method used in scientific research is usually designated as scientific method. According to George Lundberg (1946), scientific method consists of three basic steps; systematic observation, classification and interpretation of data. Through these steps, scientific method brings about not only verifiability of the facts, but also it lays the confidence in the validity of conclusions.

The definition requires some more explanations. First when Lundberg (1946) says that scientific method is systematic observation, he means, the scientific investigation is not ordered, it aims only at discovering facts as they actually are and not as they are desired to be and as such the investigators can have critical confidence in their conclusions. Second, the scientific method is concerned with 'classes of objects' not 'individual objects' specially universality and predictability. The method makes it possible to predict about a phenomenon with sufficient accuracy.

1.4.1 Use of Scientific Method in Social Science

Social sciences primarily deal with human behaviour, which is, by and large, complex and dynamic in nature. One cannot, therefore investigate the human behaviour under guided conditions as in natural and physical sciences. This creates many problems to the researcher such as the problems of subjectivity and individualistic generalisations etc.

The problem arising out of the nature and content of social sciences do not seriously diminish the importance of scientific method for social scientists. Notwithstanding the inherent defects of social sciences, scientific method can be acceptable with its own limitations for the study of social phenomena so far, as it helps to arrive at valid generalisations.

1.4.2 Possibilities and Limitations of Use of Scientific Method in Social Sciences

As described above, the social sciences deal with human beings. Hence, the subject of educational research poses much greater complexity than that in natural sciences. The usual criticism is that social science research largely emanates from ill conceived notion of research and its application in complex human setting. The social researcher needs the wisdom to choose research methodologies that are responsive to the

problem; this is, in contradiction to the obsessive use of complex quantitative method. The issue is that of a careful balance between quantitative and qualitative techniques of research depending on the nature of the problem, sample and the nature of the data.

Although problems of discovering principles of human behaviour are difficult, they are not impossible. Social scientists will need to carry out observations as carefully as are done in natural sciences. Subjective, qualitative judgements need to be supplemented by more exact, quantitative measurements which are not easy to achieve in the case of human beings. This lack of 'quantifying' and 'generalising' of data, quite often becomes a drawback in social research as well. Whereas exact sciences tend to become increasingly quantitative in their units, measures and the terminologies, in social sciences most of the matter is qualitative and does not approve of quantitative statements. We may talk of growing indiscipline, but unless we can measure it, we cannot generalise the concept.

Research adopts both quantitative and qualitative techniques. Social sciences have not been able to establish generalisations equivalent to theories of the natural sciences or, to predict events accurately. Perhaps, social sciences will never realise the objective of science as completely as natural sciences do. In fact, there are several limitations involved in the application of the scientific approach in social sciences. Let us try to see what they are:

1.4.2.1 Complexity of Subject Matter

A major obstacle is the inherent complexity of the subject matter. Natural scientists deal with the physical and biological phenomena. A limited number of variables that can be measured precisely are involved in the explanation of many of these phenomena, and it is possible to establish universal laws. For example, Boyles' Law on the influence of pressure on the volume of gases, which deals with relatively uncomplicated variables, formulates the relationship between phenomena that are apparently unvarying throughout the universe.

On the other hand, social scientists deal with the human subjects. They are concerned with the subject's behaviour and development both, as an individual and as a member of a group. There are so many variables acting independently and in interaction, that must be considered in any attempt to understand complex human behaviour. Each individual is unique in the way he or she develops, in the mental equipment, in social and emotional behaviour and in application of the overall personality. The behaviour of human beings in groups and the influence of the behaviour of group members on an individual must also be dealt with by social scientists. A group of youth leaders in one situation will not behave like youth leaders in another situation. There are youth leaders, their siblings, relatives, and community people, each with variables that contribute to the behavioural phenomena observed in a setting. Thus, researchers must be extremely cautious about making generalisations, since the data obtained in one group situation may not be valid for another group.

1.4.2.2 Difficulties in Observation

Observation, the *sine qua non* of science, is more difficult in the social sciences than in natural sciences. Observation in social sciences is more subjective because it frequently involves interpretation on the part of the observer. For example, the subject matter for investigation is often a person's responses to the behaviour of others. Motives, values and attitudes are not open to inspection. Observers must make subjective interpretations when they decide that behaviours observed indicate the presence of any particular motive, value or attitude. The problem is that social scientist's own values and attitudes may influence both the observations and the assessment of the findings on which they base their conclusions. Natural scientists study phenomena that require little subjective interpretation.

1.4.2.3 Difficulties in Replication

A chemist can objectively observe the reaction between two chemicals in a test tube. The findings can be reported and the observations can be easily replicated by others. This replication is much more difficult to achieve in social sciences. Even within a community, one cannot reproduce a given situation in its entirety and with precision. Social phenomena are singular events and cannot be repeated for purposes of observation.

1.4.2.4 Interaction between an Observer and Subjects

An additional problem is that mere observation of social phenomena may produce changes that might not have occurred otherwise. Researchers may think that X is causing Y, when, in fact, it may be their subjective observation that X causes Y. For example, in the well-known Hawthorne experiments, changes in the productivity of workers were found to be not due to the varying working conditions but to the mere fact that the workers knew they had been singled out for investigation. Investigators are human beings and their presence as observers in a situation may change the behaviour of their human subjects. The use of hidden cameras and tape recorders may help minimize the interaction in some cases, but much of research in social science includes the responses of human subjects to human observers.

1.4.2.5 Difficulties in Control

The range of possibilities of controlled experiments on human subjects is much more limited than in natural sciences. The complexities involved in research of human subjects present problems in 'control' that are unparalleled in natural sciences. In the latter, rigid control of experimental conditions is possible in the laboratory. Such control is not possible with human subjects. The social scientists must deal with many variables simultaneously and must work under conditions that are much less precise. They try to identify and control as many of these variables as possible, but the task is very difficult.

1.4.2.6 Problems of Measurement

Experimentation must provide for measurement of the factors involved. The tools for measurement in social sciences are much less perfect and precise than the tools of the natural sciences. We have nothing that can compare with the precision of the ruler, the thermometer, or the numerous laboratory instruments. We have already pointed out that an understanding of human behaviour is complicated by the large number of determining variables acting independently and in interaction. The multivariate statistical devices available for analysing data in social sciences take care of relatively few of the factors that are obviously interacting. Furthermore, these devices permit the researcher to attribute the variance only to factors operating at the time of measurement. Factors that have influenced development in the past are not measurable in the present, and yet they significantly influence the course of development.

Since research in behavioural sciences including research in education is complicated by these factors, researchers must exercise caution in making generalisations from their studies. It will often be necessary to conduct several studies in an area before attempting to formulate generalisations. If initial findings were consistently confirmed, then, one would have more confidence in making broad generalisations.

Despite these handicaps, social sciences have made great progress, and their scientific status can be expected to increase as scientific investigation and methodology become more systematic and rigorous in their research activities.

Check Your Progress 3

Describe briefly the limitations of use of scientific method in social sciences.

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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1.5 CLASSIFICATION OF RESEARCH

Though each research study has its own specific purpose, we can classify research studies by its purposes into the following categories:

1.5.1 Exploratory or Formulative Research

Studies with a purpose of gaining familiarity with a phenomenon or to achieve new insights into it, often in order to formulate a more precise research problem or to develop hypotheses are known as Exploratory or Formulative research studies.

1.5.2 Descriptive Research

The research studies which are intended to portray accurately the characteristics of a particular situation or a group or individual are termed as descriptive research. The chief purpose of these studies is to describe reality. Descriptive researches, for example, might deal with such questions as, What are people's attitudes toward development? What is the extent of child labour? Or, how many people avail the services of the primary health centres?

1.5.3 Diagnostic Research

Diagnostic studies are concerned with determining the frequency with which something occurs or with which it is associated with something else. That is, these studies are concerned with discovering and testing whether certain variables are associated, e.g., do more rural people vote for a particular political party than the urban people? Are students with public school background better placed in jobs than those who had not had this background ?

1.5.4 Evaluative Research

Evaluative research focuses on evaluation or monitoring of programmes/services to determine whether and to what extent they achieve their goals and whether they do so in the least costly and most expeditious fashion. Evaluation research can also determine whether a programme has unintended consequences that are either desirable or undesirable (Monette, et.al.,1986).

Check Your Progress 4

List out the four types of 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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1.6 NATURE OF RESEARCH

Research, as explained earlier, is systematic and critical investigation of a phenomena. It identifies the variables, collects and analyses data on such variables to find answers to certain crucial questions. These answers contribute further to increase human knowledge. Orderliness is the hallmark of research. Research has to have an organic unity. This becomes essential if the knowledge which accrues from research is to be verified; for, it must be verifiable by anybody who takes the trouble to do so. In fact, research is considered to be a formal, systematic, intensive process of carrying on the scientific method of analysis. It involves a more systematic structure of investigating, usually resulting in some sort of formal record of procedures and results or conclusions.

1.6.1 Characteristics of Research

The major characteristics of any research are; objectivity, precision, design and verifiability. Let us look at these attributes more closely:

Objectivity: Ideally, research is beyond the subjective bias of the researcher. The researcher makes deliberate efforts to eliminate personal preference resisting the temptation to seek only such data that supports his/her hypothesis. The emphasis is on testing, rather than proving the hypothesis. The researcher is willing to suspend personal judgement and permit the data and logic to lead independently to a sound conclusion. Objectivity is achieved through standardisation of research instruments, choosing appropriate research design and analytical tools and ensuring dependability of data.

Precision: Precision in scientific research is achieved through the uses of statistical methods and techniques. As such, research conclusions convey the exact meaning to the reader, e.g. measures of central tendency, variability, correlation, regression etc. are the most precise expression in quantitative research which explains or represents the truth. Precise language describes the study accurately so that the study may be replicated or the results correctly used.

Design: In a scientific research, the researcher has to have a very specified design of carrying out the investigation. This will imply that any scientific inquiry will, in general, undergo the following steps:

- defining of the problem,
- statement of the hypothesis,
- collection and analysis of data,

- testing and confirmation or rejection of hypothesis, and
- reporting of results.

Only if the research has been carried out by using a specified process, it can be replicated for verification.

Verifiability: This is an important characteristic of every research. Research methods and findings presented to the professional community for other researchers to analyse, confirm or reject them. Research is a social enterprise and its information is open for public scrutiny. This characteristic of research, i.e. verifiability, is related to the criteria of objectivity and precision. Only through further investigation or replication of studies can the results of a single study be confirmed or revised. Through this process, a body of new knowledge is developed and new questions identified.

Verifiability is achieved primarily through two different approaches: first, analysing the same data on the same sample through alternative analytical tools (statistical methods), second, replicating the study on a different sample.

1.6.2 Types of Research

Research studies may be broadly classified into two categories, namely, fundamental or basic research, and applied research. This classification is based on the goal or objective of the research study.

1.6.2.1 Fundamental Research

This type of research aims at obtaining the empirical data that can be used to formulate, expand or evaluate a theory. This type of research study is not oriented in design or purpose towards the solution of practical problems. Its essential aim is to expand the frontiers of knowledge without any intention of practical application. Of course, the findings may be eventually applied to practical problems that have social value. For example, advances in the practice of medicine are dependent upon basic research in biochemistry and microbiology. Likewise progress in rural development has been related to progress in the discovery in the general laws of development through basic research in economics and sociology. The primary concern of basic research, however, is the creation of knowledge solely for the sake of knowledge. Its design is not hampered by considerations of special usefulness of the findings.

1.6.2.2 Applied Research

Applied research is directed towards the solution of an immediate, specific and practical problem. This is a research performed in relation to actual problems and under conditions in which they are found in practice. Through applied research, development professionals are often able to solve their problems at the appropriate level of complexity. For instance, to understand group dynamics in a rural setting, we may depend on basic research for discovering the more general laws of group dynamics operating in the rural setting, but applied research must be conducted in order to determine how these laws operate in the rural setting. This approach is essential if scientific changes in rural development are to be effected.

It needs to be noted that there is not always a sharp line of demarcation between basic and applied research. Certainly, applications of theory help in solving practical problems. We apply theories of group dynamics in the community. On the other hand, basic research may depend upon the findings of applied research to complete its theoretical formulations. An experiment in group dynamics in a community could shed some light on a group dynamics theory. Furthermore, observations in a practical situation serve to test theories and may lead to the formulation of new theories.

Check Your Progress 5

Describe the two types of research 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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1.7 SCOPE OF RESEARCH IN RURAL DEVELOPMENT

Research re-examines the special body of knowledge, concepts and theories and tries to evolve a systematic theory and valid concepts. In the area of rural development, research is conducted to know the efficacy of different programmes of rural development so as to search for alternate strategies/interventions for effective implementation of the programmes.

Identification of needs and resources, evaluation of programmes and services in the areas of rural development of governmental and non-governmental organisations/agencies are some of the areas in which researches are undertaken. Research may be conducted to find out the problems faced by development professionals/workers in governmental and non-governmental organisations/agencies and communities in its concern with rural development. Thus, research in rural development embraces the entire gamut of rural development; concepts, theories, methods, programmes, services and the problems faced by development professionals/workers in their practice.

The broad areas of research in rural development may be categorised as follows:

- i) Village as a Community,
- ii) Class, castes and occupational pattern,
- iii) Rural economy,
- iv) Land reform measures and its effects,
- v) Peasant movements,
- vi) Self-help groups and women's empowerment,
- vii) Watershed management,

- viii) Rural poverty,
- ix) Poverty alleviation,
- x) Panchayatiraj System,
- xi) Cooperative movements, etc.

In each of the broad areas listed above, innumerable specific research topic could be identified. Some examples are:

- 1) Studies to identify and assess the developmental needs of rural community.
- 2) To measure the effectiveness of existing programmes and services.
- 3) To evaluate the programmes and services of rural development.
- 4) To assess the efficacy of methods and techniques of offering programmes and services.
- 5) Studies in methodology of rural development.

The list is not exhaustive, it's only an exemplary list which enlists broad areas which is very frequently studied by social workers.

Check Your Progress 6

List out the areas of research in rural development.

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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1.8 LET US SUM UP

Any study to create new knowledge or aims to increase existing fund of knowledge, may it be through observation or by some other methods, is called research. Where as the scientific research is a systematic and critical investigation about the natural phenomena to describe, explain and finally to understand the relations among them.

Scientific research starts with facts and then moves towards theorising. Theory may be defined as “a set of interrelated constructs (concepts), definitions and

proposition that present a systematic view of a phenomena by specifying relations among variables, with the purpose of predicting and explaining the phenomena.

There are several purposes to be served by a theory in the development of science. First, theory summarises and puts in order the existing knowledge in a particular area. Secondly, theory provides a provisional explanation for observed events and relationships. Lastly, theory permits the prediction of the occurrence of phenomena and enables the investigator to postulate and, eventually, to discover hitherto unknown phenomena.

Scientific method consists of three basic steps; systematic observation, classification and interpretation of data.

We can classify research studies by its purposes into the following categories: Exploratory or Formulative Research, Descriptive Research, Diagnostic Research and Evaluative Research.

The major characteristics of any research, are objectivity, precision, design and verifiability. Broadly, research studies are of two types; Fundamental or Basic Research and Applied Research. The major aim of Fundamental or Basic Research is to expand the frontiers of knowledge without any intention of practical application. Applied research is directed towards the solution of an immediate, specific and practical problem.

1.9 CHECK YOUR PROGRESS: THE KEY

- 1) Any study to create new knowledge or aims to increase existing fund of knowledge may it be through observation or by some other methods, is called research. As such, research may be defined as systematic and critical investigation of phenomena toward increasing the stream of knowledge. We may define scientific research as a systematic and critical investigation about the natural phenomena to describe, explain and finally to understand the relations among them.
- 2) Theory summarises and puts in order the existing knowledge in a particular area. It permits deeper understanding of data and translates empirical findings. It also provides a provisional explanation for observed events and relationships. Theory permits the prediction of the occurrence of phenomena and enables the investigator to postulate and, eventually, to discover hitherto unknown phenomena. Theory, therefore, plays a significant role in scientific research by providing a sound theoretical framework for further inquiry.
- 3) There are several limitation involved in the application of the scientific method in social sciences. Some of the important limitations are: complexity of subject matter, difficulties in observation, difficulties in replication, interaction between an observer and subjects, difficulties in control and problems of measurement.
- 4) Research studies can be classified by its purposes into four categories, namely, exploratory or formulative, descriptive, diagnostic and evaluative researches.
- 5) Research studies may be broadly classified into two categories, namely, fundamental or basic research and applied research. The major aim of Fundamental or Basic Research is to expand the frontiers of knowledge without any intention of practical application. Applied research is directed towards the solution of an immediate, specific and practical problem.

6) The broad areas of research in rural development may be categorised as follows:

- i) Village as a Community,
- ii) Class, castes and occupational pattern,
- iii) Rural economy,
- iv) Land reform measures and its effects,
- v) Peasant movements,
- vi) Self-help groups and women's empowerment,
- vii) Watershed management,
- viii) Rural poverty,
- ix) Poverty alleviation,
- x) Panchayatiraj System,
- xi) Cooperative movements, etc.

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