SYLLABI-BOOK MAPPING TABLE

Advanced General Psychology

Syllabi	Mapping in Book
Unit I: Basis concept-Definition of Psychology, Aims of Psychology, Schools of Psychology, Behaviouristic, Gestalt, Psychoanalysis, Humanistic. Scientific methods in Psychology: Goals of Psychological Enquiry, Nature of Psychological Data, Limitations of Psychological Enquiry, Ethical Issues. Research and Applications in Psychology, Psychology in industry, Community, Family, Education, Health, Self development, Human relations, Applying Psychology in the 21st Century: Psychology and the reduction of violence, Web surveys.	**Unit 1:** Introduction to Psychology **(Pages: 3-35)**
Unit II Hereditary and environment - Experimental studies, Growth and maturation, Social maturity as related to mental and physical growth, Evolutionary Perspective, Biological and Cultural roots, Socio-cultural shaping of Behaviour. Physiological basis of behaviour: The brain and nervous system, The sensory process, Some general characteristic of sense, Five Senses, Perception: Organization, The role of learning in perception, Perception and attention, Determinants of perception and attention, Perceptual Illusions. States of Consciousness: Sleep and Dreams, hypnosis and meditation, Drug use: The highs and lows of Consciousness.	**Unit 2:** Biological and Socio-Cultural Shaping of Behaviour **(Pages: 35-85)**
Unit III Learning-Principles and Methods, Classical conditioning, Operant conditioning, The principle of reinforcement, Observational learning, Multiple response learning, Cognitive learning, Optimizing learning: Programmed learning and automated instruction, Transfer of learning, Reward and punishment in the control of learning. Learner & the Learning Styles - Learning Disabilities, Applications of Learning Principles. Memory and forgetting, Kinds of remembering, Retrieval processes, Two process theories of memory, Memory as a Constructive process, Memory making, Eye witness and False Memories, The nature of forgetting, Are Memories permanent? Repressed Memories, Improving Memory.	**Unit 3:** Learning and Memory **(Pages: 87-142)**

Language and thought-Nature and Process of Thinking, Symbols and concepts, Structure, Forms of thought: Problem solving, Reasoning, Decision Making, Creative thinking, Development of Language and Language use, Understanding Language acquisition: Identifying the roots of language.

Unit IV:

Motivation and emotion-Physiological basis of motivation, Current status of
motivational concepts, Theories of motivation, Motivational factors in aggression,
Emotion, Emotional expression, Emotions as adaptive and disruptive, Some theories of
emotions, Managing Negative Emotions: PTSD, Management of Examination Anxiety, Enhancing Positive Emotions.

Unit V:

Individual differences-thinking and reasoning, Concept formation - Intelligence,
Theories of intelligence, Measuring Intelligence, Kinds of intelligence tests - Ability,
Formation of aptitude and attitude, Aptitude tests, Creativity and it tests.
Personality-Definition of Personality, Theories of Personality, Assessment of
Personality, Personality and different approaches.

CONTENTS

INTRODUCTION

Psychology is the study of the mind, along with such aspects of mind as perception, cognition, emotion, and behaviour. In some ways, it has only been around since the late 1800s, when people like Wilhelm Wundt, William James, and Sigmund Freud separated it from its various mother disciplines, namely biology, philosophy, and medicine. However, in other ways, it has been around as long as human beings have been discussing human beings. The immediate goal of psychology is to understand behaviour and mental processes by researching and establishing both general principles and specific cases.

Today, psychology is considered a science. Science is the effort to study a subject with an explicit promise to think logically and adhere to the empirical facts as closely as is humanly possible. Other sciences—chemistry, physics, biology, and so on—have had great success this way. For many practitioners, one goal of psychology is to benefit society. In this field, a professional practitioner or researcher is called a psychologist, and can be classified as a social scientist, behavioural scientist, or cognitive scientist. Psychologists attempt to understand the role of mental functions in individual and social behaviour, while also exploring the physiological and neurobiological processes that underlie certain functions and behaviours.

This book, *Advanced General Psychology,* will explore concepts such as perception, cognition, attention, emotion, phenomenology, motivation, brain functioning, personality, behaviour, and interpersonal relationships. All these topics are covered in the five units of the book.

The book is written in the SIM (Self Instructional Material) format for Distance Learning, and each Unit starts with an Introduction and Unit Objectives. Then, the detailed content is presented in an understandable and organized manner. Each unit also has 'Check Your Progress' questions along with their answers to test the students' understanding of the topics covered. A Summary is provided at the end of the Unit for quick revision. This is followed by a list of Key Terms and Questions and Exercises.

UNIT 1 INTRODUCTION TO PSYCHOLOGY

Structure

1.0 INTRODUCTION

Psychology is important as it is concerned with the scientific study of behaviour and mental processes; at the same time, it is also applied to many different aspects of human life. Everything we do is related to psychology. Psychology primarily studies who and what we are, why we are like that, why we act and think in a particular manner and what we could be as a person. In other words, psychology is the combination of three important terms, viz., science, behaviour and mental process.

- **Scientific study:** Psychologists search for answers to the questions What, Where and Why. They develop theories of human functioning, often developing new approaches to current knowledge. As a science, psychology uses systematic methods to observe, describe, predict and explain human behaviour and mental processes. Researchers carefully and precisely plan and conduct their studies in order to get authentic results. For example, if a researcher wants to study the high-risk behaviour among teenagers, he might spend considerable time to get the detailed answer to this question. The researcher may try to predict the high-risk behaviour of teenager influenced by factors like, parental attitude, peer pressure, personality type, etc.

- **Behaviour:** It includes all overt activities that can be directly observed; for example, someone laughing, two people discussing, a teenager riding a motorcycle etc.

- **Mental process:** It refers to all covert behaviour, such as thoughts, feeling and motives that each of us experiences privately but which cannot be observed directly.

In this unit, you will learn about the basic concept, definition and aim of psychology. You will be familiarized with the school of psychology as well as the scientific methods in psychology. We will discuss the different goals of psychological enquiry, nature of psychological data, and limitation of psychological enquiry. You will study about the ethical issues in research and applications in psychology, psychology in industry, community, family, education, health and self-development, and learn about the psychology behind human relations. You will understand the application of psychology in the 21st century and how it helps in the reduction of violence.

1.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the nature and historical development of psychology
- Discuss the need for the study of psychology
- Understand the basic aims of psychology
- Describe the different schools of psychology
- State the scientific methods used in psychology
- Explain the various goals of psychology
- Examine the nature of psychological data
- Explain the applications of psychology
- Discuss the limitations and ethical considerations in psychology
- Describe the concept of psychology in the 21st century

1.2 BASIC CONCEPT OF PSYCHOLOGY: ORIGIN OF PSYCHOLOGY AS A DISCIPLINE

Psychology grew out of the philosophical tradition of thinking about the mind and body (refer Figure 1.1).
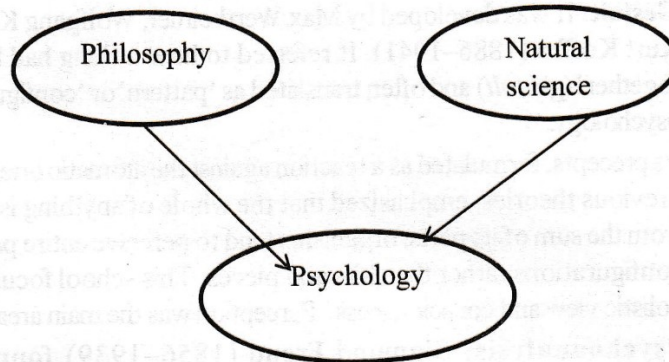
Fig. 1.1 Origin of the Study of Psychology

Psychology did not only emerge from philosophy. It has roots in natural sciences of biology and physiology as well (Benjamin, 1999). Psychology as a science emerged in the late 19th century with the work of Charles Darwin (1809–82).

Darwin proposed the principle of natural selection in his book *On the Origin of Species* in which he described the evolutionary process as favouring an organism's traits or characteristics that are best adapted to reproduce and survive. In the 19th century, physiologist also gave a boost to the new field of psychology.

Johannes Muller (1801–58), a German psychologist, proposed that an important role is to associate incoming sensory information with appropriate motor response.

In the late 19th century, psychology had emerged as a scientific discipline. However, modern psychology was born in December 1879 at the University of Leipzig, Germany, with the work of Wilhelm Wundt. In his experiments he mentioned that every mental process has a particular structure and could be studied qualitatively, i.e., the mental process could be measured. Gradually, the study of psychology was organized around different schools of thought that are as follows:

- **Structuralism:** Edward Tichener (1867–1927) was the pioneer contributor in the field of structuralism. He mainly focussed on the study of consciousness and its components, i.e., sensations, images and affects.
- **Functionalism:** It was proposed by William James (1842–1910), who studied the functions of mind and behaviour in adapting to the environment. James and his followers were looking at what goes on in a

persons' interaction with the outside world. James considered the mind as flexible and fluid, characterized by constant change.

- **Behaviourism:** It was developed by J.B. Watson (1878–1958), who proposed an objective study of observable behaviour. It is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behaviour.

- **Gestalt:** It was developed by Max Wertheimer, Wolfgang Kohler and Kurt Koffka (1886–1941). It referred to how a thing had been 'put together' (*gestalt*) and often translated as 'pattern' or 'configuration' in psychology.

  Its precepts, formulated as a reaction against the atomatic orientation of previous theories, emphasized that the whole of anything is different from the sum of its parts; organisms tend to perceive entire patterns or configurations rather than bits and pieces. This school focussed on a holistic view and consciousness. Perception was the main area of study.

- **Psychoanalysis:** Sigmund Freud (1856–1939) founded the psychoanalytic school that mainly emphasized on the unconscious mind, defence mechanism of repression, conflict, anxiety, psychopathology, etc.

Although these schools provided great opportunities for the diversification of psychology, they were unable to explain the psychological processes in totality.

Recent movements emphasized vigorously on cognitive revolution, the neural processes, role of cultural processes, etc.

In modern India, psychology started at Calcutta University headed by Dr N.N. Sengupta (1961). Gradually, psychology departments were opened in various universities like Patna, Lucknow, and Mysore. The Indian Psychological Association was first founded in 1924.

Need for the study of psychology

Using common sense does not always work. How can a student develop a better memory? Why we sleep and why we dream? Why student tend to get sick before test/exam? We remain curious to know about these questions and try to make sense in our own ways. Our understanding is always based on beliefs and personal experience which is not authentic. We need accurate and authentic understanding of the principles describing the human behaviour.

Psychology is the subject that not only helps us to understand why other people do the things they do, but it also helps us in understanding ourselves and our own reaction to others. Psychology seeks to answer question that people have been asking for thousands of years. For example, according to ancient myths most of the events—good or bad alike—occurred due to the pleasure or displeasure of the Gods. Earthquake occurred because the Gods were angry. Two people fall in love when they have been hit by Cupid's arrow. As these myths grew old, people turned to rational explanations. They attempted to explain events in terms of natural rather than supernatural causes.

1.2.1 Definition of Psychology

The word 'psychology' came from the two Greek words, *psyche* and *logos* which literally translate to the study of the soul and, later on, it progresses to the study of the mind. Today, many define psychology as the scientific study of behaviour and mental processes. Let us dissect the meaning to further understand the meaning of psychology. When we say behaviour, two things come to mind—covert behaviour and overt behaviour. Overt behaviours are behaviours visible to the eye; in short, seen behaviours. Examples of overt behaviours are the way we dress, the way we talk, the way we eat, the colour of our hair, and so on. In a nutshell, these are the actions of individuals or groups that we see everyday. These are the actions that are observable and can be measured right there and then. In contrast, covert behaviours are behaviours not visible to the naked eye. These are unseen behaviours. Examples of covert behaviours would be anger, jealousy, pity, kindness, happiness, sadness. These are behaviours that we cannot discern at one glance unless we are very observant. Covert behaviours are also measurable, but it entails a more intricate process. We can deduce covert behaviours from overt behaviours. The player acting in front of the group, who is doing the actions, is actually doing overt behaviours. The person is acting out related behaviours so that his/her group mates would be able to guess the answer.

Another factor to consider is the mental factor. When we say mental processes, again two things come to mind—conscious mental process and unconscious mental process. Conscious mental processes are the processes wherein we are aware of the surroundings; for example, when we read a book we are aware of it, we are aware when we are walking, etc. Conscious means that we are thinking about it. While unconscious processes are the processes that we are not aware of or we are not constantly thinking about it. Consider breathing, we are not thinking moment by moment that we have to breathe; it comes in naturally. These are the two parts of our definition of psychology, the behaviour and mental processes. Sometimes we have the tendency to jump to hasty conclusions specially if we do not like the person. When we see a person who is always alone, it is easy for us to say that that person is anti-social. That he/she is a nerd, not exciting to be with. We made the conclusion based on just one observable overt behaviour. That is where the scientific study comes into play. Psychology is a scientific study and it is not just making conclusions out of a single overt behaviour. When we say scientific study, the conclusion is obtained through systematic and objective methods of observation and experimentation. It follows a step-by-step procedure in observing and conducting tests before making a comprehensive conclusion. Basically, psychology is a step-by-step observation and experimentation, of overt and covert behaviours to see if it is process consciously or unconsciously.

1.3 AIMS OF PSYCHOLOGY

Psychology has the following two aims:

(i) Understanding and explaining the complexity of behaviour

(ii) Contributing to the improvement of the quality of human life

An academic psychologist pursues basic research and tries to test the hypotheses about the diverse aspects of behaviour and mental processes. They develop principles, laws and theories using various methods, viz., observational and experimental. They make efforts to describe, explain, predict and control behavioural phenomenon.

The second aim is of practicing applied psychologists. They try to use psychological knowledge to solve various human problems. Their activities include counselling, therapy, personnel selection, career guidance, consulting in organizational behaviour (e.g. team building, decision-making, leadership training, consumer survey and psychological assessment and training in various skills).

Psychologists are now seen working not only in academic institution for research and teaching, but also in institution like hospitals, schools, industries, sports complexes, military establishment, community centres, etc. Following are the important aims of psychology:

- To understand how various mental functions operate and how people behave in different conditions
- Psychology is relevant to solving problems in school, family, workplace, playground, hospitals, etc.
- Socializing children at home
- Motivating people in organizations
- Helping people to solve their emotional problems in personal lives
- Selecting people for jobs
- Assessing abilities and aptitudes of people
- Providing training for developing skills
- Setting goals and motivating people to achieve them
- Improving one's lifestyle for better health

Understanding the growth and development of a person or function of a group are important.

1.4 SCHOOLS OF PSYCHOLOGY

1.4.1 Behaviourism

During the first half of the 20th century, the behavioural approach by J.B. Watson (1878–1958) and B.F. Skinner (1904–90) emphasized the scientific study of

observable behaviour. The behavioural approach focusses on human interaction with the environment that can be seen and measured.

They argued that all behaviour is the result of conditioning and the environment shapes behaviour by reinforcing specific habit. The conditional response was viewed as the smallest unit of behaviour that could be created. All type of complex behaviour pattern coming from special training or education was regarded as nothing more than an interlinked fabric of conditional response. Behaviourists tend to discuss psychological phenomena in laws of stimuli and response, giving rise to the term S-R psychology, a set of terms that can be used to communicate psychological information.

Behavioural approach studies take place in experimental laboratories under fully controlled conditions. It also takes place outside the laboratories in natural setting; for example, school, house church, streets, playground, etc. B.F. Skinner emphasized that what we do is the ultimate test of who we are. He believed that reward and punishment determine our behaviour; like a student might study hard because this hard work rewards him with good marks.

Contemporary behaviourists still emphasized the importance of observing behaviour to continue to use the rigorous sorts of experimental methods advocated by John B. Watson and B.F. Skinner (Martin and Pear, 2003; Miltenberer, 2004; Watson and Tharp, 2003). They also continue to stress upon the importance of environmental determinates of behaviour (Baldwin and Baldwin, 2001; Spiegler and Guevremout, 2003)

1.4.2 Psychoanalysis

Psychoanalysis is both a theory of personality and method of psychotherapy originated by Sigmund Freud (1856–1939) around the turn of 20th century. The psychotherapy approach proposed unconscious thought, attitude, impulse, wishes, motivation and emotions of which we were unaware.

Freud believed that psychological development is instinctual, unacceptable wishes in the childhood that are driven out of conscious awareness, become part of the unconscious thoughts and are expressed in dreams, slips of the tongue and physical mannerism. Freud (1917) theory was the basis for the therapeutic technique that he termed psychoanalysis. His approach was controversial at the beginning of the 20th century. Today, the psychodynamic theory tends to place less emphasis on sexual instincts and more on cultural experience as determinants of behaviour.

1.4.3 Gestalt Psychology

The Gestalt approach was proposed by Max Wertheimer, Kurt Koffka and Wolfgang Kohler of Germany. *Gestalt* is a German word meaning form or configuration which focusses on studying whole patterns rather than small pieces of them. The Gestalt psychologists primarily focussed on perception but they believe that perceptual experience depends on the patterns formed by stimuli and on the

organization of experience. The whole is different from the sum of its parts because the whole depends on the relationships among the parts; for example, refer Figure 1.2.
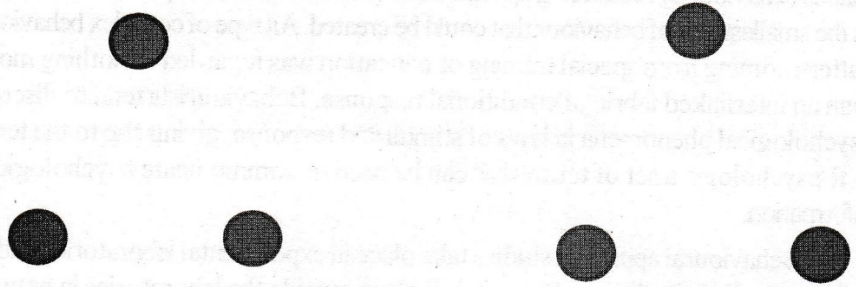
Fig. 1.2 *Two Large Triangles as Two Different Forms or Two Gestalt*

We perceive a single large triangle as a single form or Gestalt rather than as three small dots. Perception of motion was the key interaction of Gestalt psychologists; for example, how people judge size and the appearance of colour under change in illumination. Today, Gestalt idea are part of the study of cognitive psychology—a field emphasizing not only on perception, but also on learning, memory, thought process and problem solving. The basic Gestalt principle of perception are still taught within this newer field (Ash, 1998; Kohler 1992; Wertheimer 1982) to understand interpersonal phenomena (Johes, 1998). S.E. Asch (1946) extended the Gestalt notion that people see whole rather than isolated parts from the simple care of the object perception to more complex care of person perception (Taylor, 1998). They also saw the process of imposition meaning and structure on incoming stimuli as automatic and outside conscious awareness. The Gestalt approach has also become the basis for a major therapeutic technique called Gestalt therapy.

1.4.4 Humanistic Psychology

The humanistic movement was really a reaction to both psychodynamic theory and behaviour, often called the third force in psychology. The humanistic movement emphasized a person's positive quality, the capacity for positive growth and its freedom to choose any destiny. Humanistic psychologists held the view that people have the ability to control their lives and free will (Maslow, 1971; Rogers, 1961). They believed that being driven by unconscious impulses (as the psychodynamic), or by the external reward (as the behavioural approach emphasized) could not lead to a better understanding of this human potential for self-actualization, which Maslow termed as this achieving of one's full potential. Also, actual self-humanistic psychologists think that people have a tremendous potential for self-understanding and that way help others to achieve self-understanding by being warm, nurturing and supportive.

> **CHECK YOUR PROGRESS**
>
> 1. Darwin in his book, *On the Origin of Species*, proposed the principle of
>   _____.
> 2. Of the following, who emphasized more on unconscious thought?
>   (a) Freud, (b) Wertheimer, (c) Rogers (d) Watson
> 3. Name a few institutions where psychologists work.
> 4. What is the focus of the behavioural approach?
> 5. What does the psychotherapy approach propose?
> 6. What was the humanistic movement?

1.5 THE SCIENTIFIC METHOD

Scientific research is a systematic controlled, empirical and critical investigator of hypotheses about the presumed relation among natural phenomena.

- Scientific method involves investigation of some hypothetical proposition. A hypothetical proposition is conjectural or a tentative statement about the relation between two or more phenomena and variable.
- Scientific research is a systematic and controlled system. Control also makes scientific research replicable, i.e., the procedure undertaken are stated with such explicitness that any other qualified researcher could repeat the research project if needed.
- Scientific research is empirical, i.e., it is based on larger experiences of others. The investigator does not rely on his own source of learning, seeing, smelling, touching and tasting as it can lead to scientific irrationality, subjectivity and factual error in knowing about facts (refer Figure 1.3).
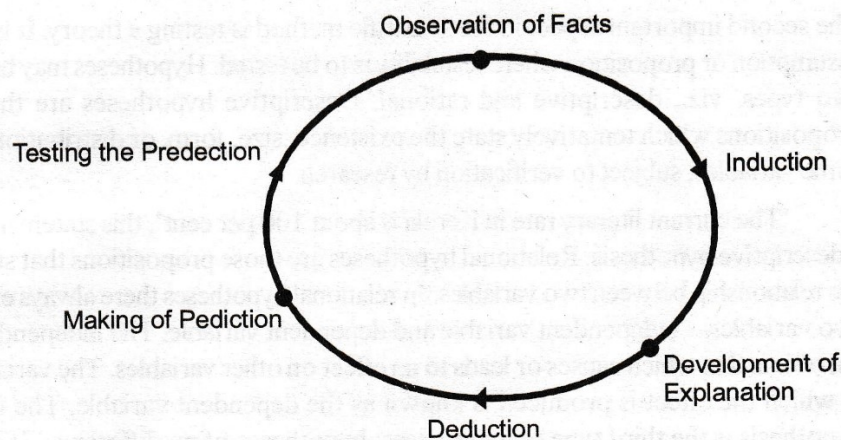
Fig. 1.3 *The Scientific Method*

The scientific approach involves adopting the scientific method in studying different topics in psychology (Langston, 2002; Salkind, 2003; Stanovich, 2004). The scientific method consists of the following processes:

- Identifying problems
- Formulating hypotheses
- Conducting experiments/surveys to collect research data
- Analysing information/research data
- Drawing conclusions that explain the findings of the research

1.5.1 Identifying Problems

A problem exists when we do not have enough information to answer a question. This may happen due to many reasons, like when there is a noticeable gap in result of several enquiries, disagreements, and when there is a desire for innovation. The problem for research should be expressed in interrogative form.

Generating theory and hypotheses are the two most important concepts in conceptualization of a problem. Theory is a set of closely related ideas that attempts to explain certain observations. Theories try to explain why certain things happened and make prediction about future observations. Theories give us a framework for trying to figure out things in a systematic manner. They help to organization and research testable theories generated in terms and allow researcher to make observation that might answer those questions. Following are the important criteria for formulating a problem:

- It should be original.
- It should be general, not very specific.
- It should be solvable.
- It should be feasible.

1.5.2 Formulating Hypotheses

The second important aspect in the scientific method is testing a theory. It is an assumption or proposition where testability is to be tested. Hypotheses may be of two types, viz., descriptive and rational. Descriptive hypotheses are those propositions which tentatively state the existence, size, form, or distribution of some variables, subject to verification by research.

'The current literary rate in Kerela is about 100 per cent', this statement is a descriptive hypothesis. Relational hypotheses are those propositions that state the relationship between two variables. In relational hypotheses there always exist two variables—independent variable and dependent variable. The independent variable is that which causes or leads to an effect on other variables. The variable in which the effect is produced is known as the dependent variable. The null hypothesis is the third type of hypotheses; hypotheses of no difference. If it is rejected, the alternative hypothesis may be accepted. Rejection of null hypotheses, however does not immediately forces acceptance of a contrary view.

Advantages

The advantages are as follows:

- It builds researcher's confidence in his result.
- A sound hypothesis gives direction to the inquiry.
- It aids delimiting and singling out pertinent fact and in determining which fact may be included and which omitted.
- A good hypothesis enriches theory.
- After any hypothesis has been verified and confirmed, it becomes a part of a theory.

Criteria of good hypotheses

The following are the criteria for good hypotheses:

- Good hypotheses should be simple.
- They should be specific, not trivial or inconsequential.
- Hypotheses must always be stated before collecting evidences aimed at its testing.

1.5.3 Conducting Experiments/Surveys to Collect Research Data

The collection of data is the fundamental means of testing hypotheses. Collection of data is the first step in the statistical treatment of problem. Numerical facts are the raw material upon which the investigators work and just as in manufacturing, quality of the data used is a major concern. There are different experimental and non experimental methods for data collection.

1.5.4 Analysing Information/Research Data and Drawing Conclusions to Explain Research Findings

After collecting data, the researcher has to process and analyse these in order to reach a specific conclusion. Analysis of data depends upon the measurement and sampling procedure followed in their collection. The analysis of collected data can be either statistical or non-statistical. A statistical analysis is always more precise and objective. There are two type of measure used for statistical analysis of the data collected, which are as follows:

    (i) Descriptive statistics

    (ii) Analytic statistic

     All statistical measure to describe the data are called descriptive statistic. Descriptive statistic may further be divided into the following three categories

    (i) Univariate analysis (average, dispersion, skewness)

    (ii) Bivariate analysis (simple correlation simple regression)

    (iii) Multivariate analysis (multiple correlations, multiple regression, factor analysis, etc.)

(i) Univariate analysis: Where the data consists of measurement of only one variable, they are often presented either in the form of a frequency table or a time series. Statistical techniques which one uses are quite different from each other. A frequency table is commonly analysed in term of its four characteristics, i.e., central tendency, dispersion, skewness and kurtosis, whereas time series is analysed in term of four components, viz., trend, seasonal variation, cyclical variation and irregular variations.

(ii) Bivariate analysis: It is used when we have the data on two variables and we intended in knowing the following:

- Whether there exists any correlation or association between the two variables.
- Whether one of the two variables is the cause and other the effect.

(iii) Multivariate analysis: They are the ways of studying multiple influences of several independent variables on one or more dependent variables.

Drawing conclusions that explain the findings of the research

This is the important part of scientific research. It should present the essential details of the statistical analysis because of the technical nature of the material. Its organization and presentation are critical and should depend upon the type of report. Description of chance or accidental discoveries should be avoided.

1.6 GOALS AND LIMITATIONS OF PSYCHOLOGICAL ENQUIRY

Every science has different goals; in physics the goal is to learn how the physical world works, in biology the goal is to understand the processes of scientific inquiry and technological design to investigate, question, conduct experiments and solve problems.

In psychology we have different goals that aim to study mysteries of human and animal behaviour. Description involves observing behaviour and noting everything about it—what is happening, where it happens, to whom it happens and in what circumstances it seems to happen. For example, a teacher might notice that the teenagers are behaving oddly in the classroom. They are not turning in their homework, their grades are slipping and they seem to have a very negative attitude towards school.

- **Description:** The first step towards gaining understanding is to obtain a systematic description of the phenomenon under study. It determines the range and boundary of phenomenon, e.g. what teens are doing gives a starting place for the next goal, why they are doing it, why it is happening are also to be answered, but later

- **Explanation:** A theory is a general explanation of a set of observation or facts. The goal of description is to provide the observation and the goal of

explanation is to build the theory; for example, if all the test seems to indicate that the teens face many pressures and temptations everyday when it comes to alcohol, drugs, smoking, gambling, etc. The next step would be trying to predict what is likely to happen if the situation stays the same.

- **Prediction:** When we get the explanation of some phenomenon we can assume that the ability to make prediction is based on systematic analysis of the various causal factors. The presence or absence of those factors can help one to tell what and when it will happen again.

Determining what will happen in the future is a predication. For example, a psychologist or a counsellor would base their predictions on previous researches on a similar situation of drugs, alcohol, gambling and smoking addiction. These youngsters who become addicted to alcohol or drug use will now suffer the consequences of this behaviour for the rest of their lives. Something has t be done to change this prediction.

- **Control:** It is important to modify the behaviour. The goal is to change behaviour from an undesirable one (such as failing in school) to a desirable one (such as academic success).

Not all psychological investigations will try to meet all four goals. In some cases, the main focus might be on description and prediction, as it would be for a personality theorist who want to know what people are like (description) and what they might do in certain situations (prediction). Some people are interested in both description and explanation, as is the care with experimental psychologist, who designs research to find explanation for observed behaviour. Therapists would be more interested in control.

1.7 NATURE OF PSYCHOLOGICAL DATA

The collection of data is the fundamental means of testing hypotheses. Methods of data collection can be classified into three basic categories, viz., descriptive method, correlation method and experimental method (refer Figure 1.4).
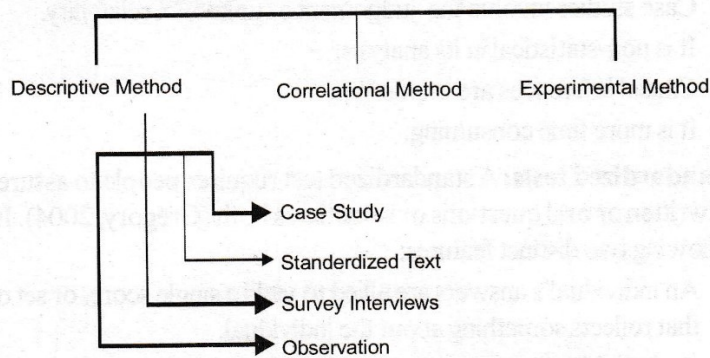
Descriptive Method   Correlational Method   Experimental Method

Case Study
Standerdized Text
Survey Interviews
Observation

Fig. 1.4 Nature of Psychological Data

1.7.1 Descriptive Method

It serves the purpose of observing and recording behaviour and mental states. Descriptive methods include observation, survey, interviews, standardized tests, case studies, etc.

- **Case studies:** Case study is an in-depth look at a single social unit—an individual, a family, institution or culture group, etc. The researcher has considerable discretion in gathering information from personal documents, diaries, autobiographies, interviews, etc. Case studies are performed mainly by clinical psychologist when, either due to practical or ethical reason, the unique aspects of an individual's life cannot be duplicated and tested in other individuals (Dattiillio, 2001). Traumatic experience has produced some truly fascinating case studies in psychology.

Advantages

Following are the advantages of preparing case studies:

- o To present evidence on what the researches are considered to be—a rare, remark or typical instances of some phenomenon
- o To illustrate a concept that would be different to describe
- o To demonstrate the use of techniques (e.g., the conduct of team building exercise)
- o To establish a pool of data that may be useful at a future point in time
- o To challenge the existing theory with the help of case study evidences
- o To serve as an individual or hypotheses-generating vehicle
- o To describe the process of change, usually induced change

Limitations

The following are the drawbacks of case studies:

- o There is nothing inherent in case studies method.
- o Only one unit of a defined population is studied. Hence the finding of this study cannot generalize to the large population.
- o Case studies involve the judgement of unknown reliability.
- o It is non-statistical in its analysis.
- o Causal inferences are impossible.
- o It is more time consuming.

- **Standardized tests:** A standardized test requires people to assure a series of written or oral questions or sometimes both (Gregory, 2004). It has the following two distinct features:

- o An individual's answers are allied to yield a single score, or set of scores that reflects something about the individual.
- o An individual's scores are compared with the scores of large group of similar people to determine how the individual responded compared to other (Cohen and Swerdlik, 2002).

One widely used standardized test is the Scholastic Assessment Test.

Advantages

The following are the advantages:

o Standardized test provides information about individual differences among people (Aiken, 2003; Walsh and Betz, 2001).

Limitations

The limitations are as follows:

o The problem with standardized test is that they do not always predict behaviour in no test situations. Another problem is that standardized tests are based on the belief that a person's behaviour is consistent and stable but the two primary targets of standardized testing can vary with situation.

- **Survey method:** It is a form of ex-post facto research in which a researcher collects data about certain characteristics of a sample that represents the known population in natural settings.

In this method, researcher only studies samples drawn from populations. They collect data directly from respondent by some systematic techniques such as interview and questionnaire. The entire survey method is diagrammatically represented with each step explained in Figure 1.5.
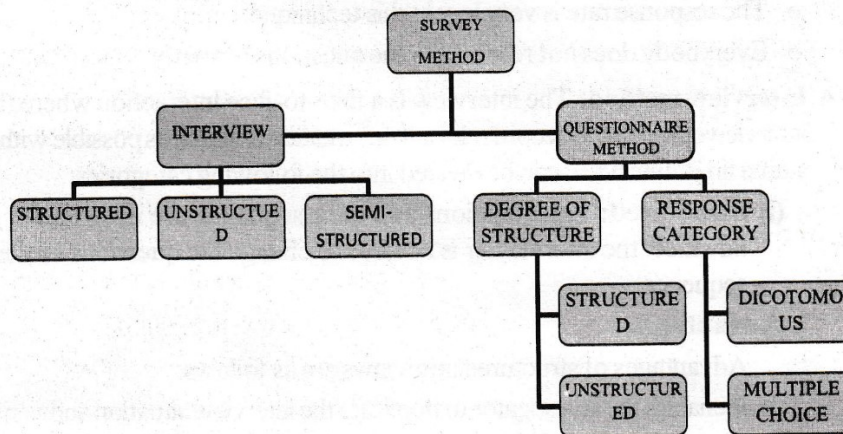

Fig. 1.5 Survey Method

- **Questionnaire:** A questionnaire is a set of questions filled by the respondents themselves. Questionnaire is used to obtain people's attitude or beliefs about different topics. Questionnaires generally vary in the following two ways:

  o **Degree of structure:** On the basis of degree of structure, questionnaire can be divided into structured and unstructured questionnaires. Structured questionnaires are those in which questions to be responded are very precisely and concisely stated in advance. Structured questionnaire maximizes standardization. However, they make responses inflexible.

Whereas, in an unstructured questionnaire respondents are free to response the questions in their own way. Flexibility is the important merit of this questionnaire. However, it is difficult to judge the reliability of information.

o **Response categories:** Questionnaires also vary in respect to the number of response categories, e.g., dichotomous and multiple choice.

Advantages

The following are the advantages:

o It is a relatively inexpensive mode of data collection.
o It can be administered to a large group of people.
o It presents uniform stimulus to all the subjects.
o Convenience of the responses is maintained here.

Limitations

The limitations are as follows:

o Not suitable for illiterate respondents.
o This technique does not provide a check on the honesty and reliability of responses.
o The structured nature of questionnaire may limit the usefulness of information that might be obtained from the respondents.
o The response rate is very low in this technique.
o Everybody does not respond to the questions properly.

- **Interview method:** The interview is a face-to-face interaction where the interviewer's aim is to record relevant information as much as possible within a time limit. Interview can be divided into the following categories:

    (i) Structured: The questions and their sequence are determined in advance. the interviewer is not free to change the questions or their sequence.

    Advantages

    Advantages of structured interviews are as follows:

    o It enables the investigator to duplicate the interview situation and verify the results of previous one.
    o This method is more economical.
    o Demands lesser skill of the interviewer.
    o It forces the respondents to answer spontaneously.

    Limitations

    The disadvantages of structured interviews are as follows:

    o It permits little flexibility to the interviewer.
    o It prevents investigator to go for in depth study.
    o It looks like the substitute of paper-pencil test.