PSYCHOLOGY IN EDUCATION
(AN INTRODUCATION TO BASICS)
- A HAND BOOK

AUTHOR
DR. S.SATHIYAGIRIRAJAN
[Former Professor of Education, DDE ;
Former Director, UGC – Academic
Staff College (Human Resources
Development Centre)
MADURAI KAMARAJ UNIVERSITY,
MADURAI – 625 021
T.N. INDIA.]

FOREWORD

This hand book is a modest attempt of the author to present Psychological foundations of Education. The essence of several standard books on Psychology in Education is distilled and presented covering a variety of topics. I have been a teacher educator for over three decades – facilitating sessions on themes related to Educational Psychology for B.Ed/ M.Ed / M.Phil students, research scholars, and Teacher participants in orientation programmes, Refresher Courses, seminars and workshops. This handbook is dedicated to them since they suggested a handbook on "Psychology in Education" be authored by me.

I believe this handbook will be useful to teachers and parents or whosoever interested in Educational Psychology.

The author's 'Tools of Research for studies in Education' and 'Teacher Education oriented materials' may also be referred to as a supplementary exposure.

Feedback is most welcome.

S.SATHIYAGIRIRAJAN

(IV)

SECTION I
INTRODUCTION

- What is Educational Psychology?
- Stages of Human Growth and Development
- Heredity and Environment (Nature and Nurture)

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CHAPTER 1
WHAT IS EDUCATIONAL PSYCHOLOGY?

Content outline: Psychology – Behaviour – Subfields – Theory - Approaches to study of human behaviour – (neurobiological, behaviouristic, cognitive, psychoanalytic, humanistic) – Methods of study (introspection, extrospection / observation, experiment, case study / survey) – Educational Psychology – its focal areas and specific objectives.

Psychology

There are many false notions about psychology and psychologists. Psychology is not mind reading and psychologists are not gifted with mystic powers; they are not demi-gods with spiritual powers. They cannot size up people effortlessly; they cannot assess the character, the personality of the individual at a glance. There are many self-styled psychologists who claim to study personality and thoughts of an individual by his physical features, his handwriting by the way he is seated, by the style of his walking. They are psycho-quacks. Psychology is a science and psychologist is a scientist. Science is a body of verifiable knowledge based on observation and experimentation. Scientists do not take things for granted; they observe, investigate and find truth by themselves. Science begins with observation. The fundamental principle of science is to seek facts rather than depend upon authority or sheer speculation. Scientist begins with questions, looks for relevant data and observes under controlled conditions. He is not trying to prove something; he is testing something; he is impartial and objective; he is intellectually honest and open-minded.

Psychology was once a branch of philosophy. It was defined as a study of soul; then as a study of mind (mental philosophy) and later as a study of consciousness and now as a study of behaviour.

Subfileds

Psychology is a collection of several subfields. Some psychologists employ basic research (development of theories) ; Some applied research (testing theories) some provide professional services (teaching, counseling and the like). Basic Research is often employed by Biological Psychologists (focus : links between brain and mind), Developmental Psychologists (focus : growth and development from birth), Cognitive psychologists (focus : how we perceive.. Imagine think, reason and solve problems) and Personality Psychologists (focus : how we perceive influence one another). Applied Research is employed by I/o (Industrial / Organizational Psychologists) and Educational Psychologists. Clinical Psychologists study and assess troubled people: they administer and interpret tests, provide psychotherapy and mental health programmes. They conduct both basic and applied research. Psychiatrists are medical doctors; they prescribe drugs or other methods to treat physical causes of psychological disorders.

A theory is a statement that establishes a cause – effect relationship between factors (variables). A Psychological theory is an explanation through a set of criteria that predicts behaviours,

Behaviour

Behaviour is your response to a situation with which you are confronted. Behaviour may be internal (implicit, covert) or external (explicit, overt). Any behaviour which can be observed, interpreted and evaluated is external - physical movements, gestures and facial expressions, the way we walk, the way we talk and the like behaviours. Internal behaviour refers to our thoughts and feelings which cannot be observed directly. Action is external; Motive is internal. For every action there is a corresponding motive. No action is motiveless. There may be different motives which generate the same action. A motive may cause different

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actions. Research studies focus more on internal behaviours than on external ones. Psychologists who attempt to modify or refine external behaviour must investigate and identify the corresponding internal behaviour. Then only their attempts will be effective.

Psychologists view human behaviour as a result of 'inside' forces or 'outside' forces. Inside forces refer to needs, wants, desires, interests, attitudes, feelings and the like. Outside forces refer to attractive or disturbing aspects of the situation, attitudes and expectations of others, social approval or rejection, rewards, dangers, threats and so forth.

Domains of Behaviour

Psychologists identify three domains of behaviour :

-    Cognitive domain (thinking - intellectual activities)
-    Affective domain (feelings, emotions, attitudes and the like)
-    Psychomotor domain (acting or doing, motor activities, - previously called conative domain)

Approaches to Behaviour

There are different approaches to study and interpret human behaviour. Neurobiological approach focusses on the central nervous system (According to Biological Psychologists, any thing psychological is basically biological, „Without your body you are nobody"). Behaviouristic psychologists, (Behaviour means external behaviour which can be observed) believe in 'shaping" behaviour by training. Cognitive approach focusses on our thought processes - sensation, perception, imagination, thinking, reasoning and problem solving. Psycho - analytic approach emphasizes the role of "the unconscious mind" in the study of behaviour (Freudean approach to human behaviour). Humanistic approach has soft corner for the human being. It focusses on current motives and drives.

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It gives least importance to genetic influence, historical roots or the unconscious motives.

Neurobiological Approach:

This is the approach of physicians, medical scientists and biological scientists. The human brain (the central nervous system) is the most sophisticated computer system. Psychologists who employ neurobiological approach to study human behaviour try to identify a part or a point in the central nervous system especially in the brain for any human behaviour to be associated with. For any change in that behaviour (appearance or disappearance, improvement or decrease) the particular part or point is to be treated through medicine or exercise; for example the role played by temporal lobe in memory (through memory trace); the role played by hypothalamus in emotion and so on. However this approach is not in a position to change human behaviour completely in several situations.

Behaviouristic Approach:

Behaviourists mean external behaviour when they use the term, 'Behaviour'. According to them only those behaviours which can be seen or observed by others are verifiable and hence they only constitute the study of psychology. They believe in conditioning – classical, instrumental.

They believe in 'shaping' behaviour as advocated by Skinner. They advocate intensive training and physical occupation (rigorous physical exercises) as modes of modification of behaviour. Some psychologists call it a 'black box' approach to human behaviour since it does not take into account what goes on 'inside the organism' (human mind), which, according to them, is largely responsible for behaviour.

Cognitive Approach:

The focus of cognitive psychologist is entirely on cognitive processes like perception, imagination, thinking and reasoning. In addition to those processes behaviour is caused by affective processes (feelings, emotions, drives and urges) too. Hence any approach to study human behaviour entirely on cognition is not likely to be effective.

Psycholo-Analysis:

Freud and his followers highlighted the role of 'the unconscious mind' in human behaviour. We do agree that there are behaviours which are caused by unconscious impulses. But we cannot attribute all behaviour to the unconscious. Further only psychiatrists will be in a position to identity the unconscious motive or drive which is instrumental to a particular behaviour. Psycholo-analysis is theoretically interesting but, in practice, extremely difficult.

Humanistic Approach:

Humanistic psychologists have 'soft corner' for human beings. Freudean observation is: Man is basically bad driven by infrahuman motives; he is to be sublimated and refined. Humanistic psychologists are of the opinion: Man is basically good; it is the environment that makes or mars him. Their focus is on the current motives and drives – what has happened right here, right now. Their approach is also called 'here and now' approach. They give least importance to genetic influence, historical roots or the unconscious motives. Counsellers of the day employ humanistic approach to study and modify human behaviour.

Finale:

Modern approach is integrated in nature, a judicious mixture of the most appropriate ones depending upon the nature of the person, the nature of the problem, the nature of the circumstances and such other related factors. These approaches are not contradictory but complementary.

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METHODS OF STUDY

Introspection:

It is self-observation – looking within 'or looking inward'. To introspect means to attend to the workings of one's own mind in a systematic way. Mental experiences are observed as and when they occur and attempts are made to understand their nature so that generalizations can be made. The results of introspection are usually subjective; they are not scientifically valid. Further the moment you begin to study a mental state, it tends to disappear. In case of anger or fear one becomes emotional. In such circumstances one cannot look within. Suppose you are being chased by a wild animal, you start running under the grip of fear. Suppose you have become extremely angry because of disturbance caused by somebody, you are charged with emotion. In such frightened or emotionally charged circumstances, you can never introspect. The remedy suggested is retrospection – observation of the mental process immediately after it is over, when the impression or memory is still fresh. To think about a present experience is introspection. To collect a past experience is retrospection. As a result of a gap between the present and the past the original account may be distorted. Introspection cannot be used to study the behaviour of children, animals or insane people. In spite of its imitations introspection, as a method of study of human behaviour, is still valid with special reference to mental processes like thinking or reasoning.

Extrospection (Observation):

While introspection is subjective extrospection is objective. We observe the mental processes of others by observing their behaviour – overt behaviour and motor reactions. When we want to study the experiences of the individual not only from the point

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of view of overt expressions but from the point of view of inner impressions, feelings, this method will have serious limitations.

Observation is regulated perception – disciplined perception – perception with a specific purpose. By observing external behaviour, we attempt to study and interpret internal behaviour. There are different kinds of observation – direct and indirect, scheduled and unscheduled, participant and non-participant. To make observation purposeful and meaningful the observer should specify the objectives of observation in clear and operational terms.

Experimental Method:

Experiment is observation under controlled conditions. Modern psychological science is largely based on experimental method. It is not able to depend wholly on this kind of method (experimental) used by exact sciences because of the subject matter of psychology, the human being. Experiment consists of objective observation of actions performed under rigidly controlled conditions. The purpose of experiment in psychology is to identify the causal factors of behaviour.

If two situations are a like in every respect and one factor is introduced or withdrawn from the one but not from the other, any difference that emerges is the result of the operation of that factor.

Here is an illustration. Suppose we want to study the effect of encouraging remarks on the answer scripts. Two equivalent groups of students are identified based on 'matching' or 'balancing' them on their previous academic performance and related factors. One is called control group. No remarks (encouraging or discouraging) are given on the answer scripts of these students. The other group is called experimental group. Encouraging remarks are given on the answer scripts. After some time (six months or so – six monthly tests and treatment) the performance of the two groups are compared. If the experimental group is superior

to the control one, then it can be concluded that encouraging remarks on the answer scripts do facilitate higher academic performance.

Case Study:

A case study is also known as the case history of the individual because it is the analysis of the most important aspects of the individual. The analysis is in the form of past record, present position and future possibilities. The objective of case study is to study the individual or the group to diagnose specific problems and suggest remedial measures. The complete and detailed study of a case may involve the use of observations, interview, medical examination and use of various tests in intelligence, interest, aptitude and personality. Case study may involve a group of individuals, an institution, or a psychological phenomenon and the like.

Survey

Case study is intensive whereas survey is extensive. With the application of psychology to various aspects of life it has become necessary to collect data from a large number of people – attitudes, beliefs, prejudices and the like. Questionnaires, attitude scales, rating scales, observation schedules, interview schedules, interest inventories, personality inventories and such other tools of research will be employed to collect data. Appropriate statistical techniques will be used to analyse and interpret data.

Educational Psychology:

Educational psychology is not merely the application of principles of psychology to educational situations but something more than that. It is the study of the psychological aspects of educational situations. The objective of educational psychology is to help teachers develop an understanding of educational process especially class room learning.

Educational psychology is concerned with three focal areas

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– the learner, the learning process and the learning situation.

The Learner:

Teachers must have an understanding of the psychology of the learner – the various psychological forces which operate in his field – interests, attitudes, feelings, sentiments emotions, needs, urges and the like.

The Learning Process:

It focusses on what happens to the individual when he learns, why he learns what the teacher wants him to learn, why he does not learn what the teacher wants him to learn. It attempts to pinpoint specific behaviours of learning.

The Learning Situation:

It is concerned with those factors or conditions that influence the learner and the learning process – class room climate conducive to effective learning. Can we identify and introduce factors which facilitate learning? Can we identify and remove factors which affect learning?

Good teaching is much more than understanding these areas. But understanding is a basic requirement. The specific objectives of educational psychology are:

- To develop a scientific attitude in the teacher towards educational problems.
- To help the teacher set up appropriate educational situations so that changes in behaviour of the learners can be brought about towards desirable goals.
- To help the teacher in treating his students with sympathy and empathy.
- To help the teacher organize the academic content to be taught.
- To help the teacher realize that the social relationships are of utmost importance in the educational process.

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- To help the teacher develop a problem solving research attitude.
- To help the teacher in providing guidance and counselling to his students.
- To help the educational administrators organize and administer the instituions.
- To provide the teacher with effective methods of teaching.

Questions

1. What is Psychology? (in about 75 words)
2. Identify the major subfields of psychology (in about 75 words)
3. Define the term,Theory" (in about 25 words).
4. Define 'Behaviour'. Identify and briefly explain the three domains of behaviour (in about 75 words)
5. Attempt a critical estimate of the different approaches to human behaviour (in about 750 words)
6. Distinguish between introspection and extrospection (in about 150 words)
7. Define and explain experimental method in psychology (in about 300 words)
8. Distinguish between case study and survey (in about 300 words)
9. Define the term, 'Educational Psychology'. Identify and briefly explain its three focal areas. Briefly outline its specific objectives (in about 300 words).

CHAPTER 2
STAGES OF HUMAN GROWTH AND DEVELOPMENT

Content outline: Growth and Development – Infancy – Early childhood – Later childhood – Adolescence – Adulthood – Senior Citizens – Developmental Tasks – Physical, intellectual, emotional, social and moral development.

Growth is quantitative whereas Development is qualitative. Growth refers to increase in size-height, weight and the like. Development refers to changes in the desired direction – increase or decrease. (For a bulky person decrease in weight (because of physical exercises) is development whereas for a puny person increase in weight (because of physical exercises) is development. Development implies progressive change influenced by maturation and learning. Knowledge of the stages of human growth and development will help the teacher and the educational administrator in structuring appropriate curriculum and employ suitable methods of teaching and evaluation.

Based on certain common developmental characteristics, psychologists have classified the life span of the human being into the following sequential stages of growth and development.

Prenatal (before birth)
Postnatal (after brith)
Infancy (upto 2 years)
Childhood
  - Early (3 to 6 years)
  - Later (7 to 10 years)
Preadolescence (11 to 12 years)
Adolescence
-   Early (13 to 15 years)
-   Later (16 to 19 years)

Adulthood
- Youth　　　(20 to 40 years)
- Middle age (41 to 60 years)

Prenatal:　　　- Old age　　(60 and above)

This refers to a period of around 270 to 280 days from the time of conception to the time of birth. Several characteristics displayed by the child later may be partly due to prenatal (congenital factors) influences. Proper healthcare, proper nutrition and emotional wellbeing of the mother are vital factors which influence the unborn child.

Postnatal:

Infancy:

Infancy refers to the first two years of life. The infant gradually develops speech to express itself in simple words. Infancy is the most formative stage in the entire process of growth and development. The infant is independent regarding the basic functions of the body like respiration, digestion, circulation of blood and maintenance of body temperature. Its average weight at birth will be around 3 kilogrames and height around 30 centimetres. There will be gradual growth in height and weight. The infant is able to sit, stand and walk. The infant also learns simple motor skills like handling toys and objects around him at home. The infant gradually forms concepts about surrounding objects. The infant also exhibits fear, anger and love and learns forms of expressing them. The infant has close relationship with its mother. It is happy when its mother is close and unhappy when its mother is away. The infant reacts positively to persons who treat it with affection.

Early Childhood:

The period of early childhood is from 2 to 6 years of age. The child gradually acquires simple motor skills. There is considerable improvement in perceptual ability in identifying differences in colour, size, shape and weight. The child is curious to know things around and poses several questions at people around. Language ability improves. The infant gains vocabulary. The child gradually finds delight in the company of other children paving the way for group activity and co-operation.

Adulthood:

Adulthood extends from 20 years to 60 years age. The stage of adulthood can be classified as early adulthood (20-40) – youth and later adulthood (40-60) – middle age. The major task of adulthood is one must become independent, assume social responsibility and become somebody in society.

Senior Citizen

One becomes a senior citizen by the time one completes 60 years of age. He retires from formal service. If senior citizens (men and women) take care of their health (physical and mental) they can contribute effectively to their families and society. Senior citizens can grow old gracefully and can be personally happy and socially useful.

Development Tasks:

Development tasks are those tasks to be performed by the growing child for the proper development at the different stages of human growth and development and smooth transition from one stage to the subsequent one. Havighurst identified several developmental tasks required of a human being at different stages. During infancy developmental tasks relate to motor activities.

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After completion of age one infant must make attempts to speak.

During early childhood one must know gender difference. During later childhood the child enters peer group. The child by now knows how to talk and perform normal physical skills required for the playfield. During adolescence he accepts his body and learns how to keep it fit; he learns to adjust with people at home and outside. Successful achievement of a task leads to happiness. Achieving economic independence, mature relations with peer group, emotional and social maturity make the human beings live as competent members of society.

Physical Development:

The rate of physical growth is more rapid in the first two years. Motor activities such as head control, movement of eyes, sitting, standing, walking, moving are important for personal growth and development. The child makes contact with the external world only through motor development, which is closely related to intellectual, emotional and social development. There are, of course individual differences in physical growth and development.

Intellectual Development:

Intellectual development refers to the development of cognitive aspects of behaviour – sensation, perception, concept formation, imagination, thinking, reasoning and problem solving. Sensations are gateways to knowledge. Sense training will helpchildren in sharpening their sense perceptions and subsequently observation. Concepts are formed when the child is exposed to a variety of percepts. Striking images (mental percepts) lead to imagination and subsequently to thinking, reasoning and problem solving. Home climate and classroom climate must be conducive and expose the learner to a variety of meaningful learning experiences.

Emotional Development:

Infants at the time of birth do not display any emotions. Gradually, they develop emotional reactions. Children display periodically temper tantrums. Children shift from one emotion to another. Emotions may be positive or negative. Affection and joy are positive while anger and fear are negative. Expressing appropriate emotions at the appropriate time is emotional maturity. Emotional control, emotional stability, emotional balance and emotional maturity will be acquired from parents and others at home and from teachers in educational institutions.

Social Development:

Social development implies socializing the individual. It is a gradual process. The individual gets exposed to social norms; he starts complying with them quite willingly. He acquires human relations skills and is able to pull on with others. He acquires nice temperament and a high degree of adjustment. This implies social maturity; social maturity is a symptom of a social development.

Moral Development:

Moral development in the individual has three phases – pre-conventional, conventional and post-conventional – to distinguish between ethical and unethical and choose the ethical.

In the first stage the individual does the right to avoid punishment; in the second stage he does the right to gain a reward – social approval or recognition; in the third stage he does the right thing because he feels like doing it (self-imposed moral values). Home climate, school climate and community are largely responsible for moral development.

The priority of infancy is health; that of childhood is hand (motor skills development) that of adolescence is head (intellectual evelopment) and thereafter it is heart (emotional and moral

development).

Questions:

1. Distinguish between growth and development (in about 75 words)
2. Identify and briefly explain the sequential stages of human growth and development (in about 450 words)
3. Define and briefly explain the meaning of 'Developmental Tasks' (in about 150 words)
4. Identify and briefly explain the different aspects of development in the life of a human being (in about 300 words)

{This chapter is an initial exposure on the basics of the growth and development of the learner. In chapter 27 there will be on exposure to Piaget's theory. In chapter 26 there will be an exposure to the Psychological field of the adolescent learner. Chapter 28 outlines ' individual differences' in growth and development. These chapters are supplementary and complementary to the current discussion.}

CHAPTER 3
HEREDITY AND ENVIRONMENT
(Nature and Nurture)

Content outline: Inheritance – Its principles – Relative influence of heredity and environment – Educational implications – Current Trend.

We often ask ourselves whether the characteristics of a child – his being good or bad, bright or dull, healthy or sick, happy or unhappy – depend mainly on his heredity or on his environment. Similarly in assessing an adult some attribute his success to the opportunities and good luck whereas others hold that he was born with much potentiality and became successful because of his inheritance. To the teacher a knowledge of relative effect of the forces of heredity and environment in human development and their interrelationship is of signal importance.

Nature is that with which a child originally starts its life. Nurture refers to the influences which play upon the child since birth and make him what he is. Heredity is the sum total of the potentialities possessed by an organism in the zygote stage. Zygote is the result of fusion of an ovum of mother and a sperm of father. It is first divided into 2 cells, then into 4, then into 8 and finally into about 2 billion cells at the time of birth (2^0, 2^1, 2^2, 2^3 ·········· $2 \times 10^3 \times 10^6$). The germ cell contains chromosomes – 23 pairs in the cell of each parent. The chromosome, in turn, is made up of genes (or determiners) and each chromosome consists of about 40 to 100 genes. At the time of conception, half of father's chromosomes unite with half of mother's chromosomes and determine the potential characteristics of the offspring. The result

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of the union of the genes is called heredity. If father's genes for tallness unite with mother's genes for tallness the child will inherit tallness. If the male genes for brightness unite with female genes for brightness the child will inherit brightness. If father and mother have genes for weak lungs and if these genes pair, infant will have a pre- disposition to tuberculosis. Diseases are not inherited but weaknesses are. Psychologists have identified three principles of inheritance:

 - Like beget like (Bright parents beget bright children)
 - Variation (Bright parents beget dull children)
 - Regression (Bright parents beget mediocre children)

In the examples cited above 'brightness' may be replaced by any other characteristic – physical or mental. The congenital period of life is the embryonic period or the period of pregnancy. The pregnant mother should be well nourished and healthy emotionally. Children do not inherit the acquired abilities of their parents. There is no relationship between the order of birth and intelligence of the child.

The child's heredity is not determined solely by his immediate parents. Probably 50% of inheritance is from the immediate parents, 25% from grandparents, 12.5% from great parents and so on. One inherits not only from one's parents but through one's parents as well.

Heredity is a constant factor established at the time of conception. The individual's environment, on the other hand, is continuously expanding. Heredity means biological heredity not social heredity, which refers to the characteristics, acquired by social interaction – this is, more precisely, environment.

To study the relative influence of heredity (nature) and environment (nurture) on the growth and development of human beings, psychologists have analysed several studies under different categories.

- Human heredity (nature) and infrahuman environment (nurture).
- Infra human heredity (nature) and human environment (nurture).
- Environment constant (different heredities)
- Heredity constant (different environments)

Identical twins, fraternal twins and siblings were reared together, reared apart, and in foster homes and compared in physical, mental, emotional and social characteristics.

The following table summarises the results:

S.No	Factors	Influence of Heredity (Nature)	Influence Of Environment (Nurture)
1.	Physical growth and development	To a large extent	Effect of nutrition and healthy emotional climate
2.	Mental growth and development (Intellectual)	Potential has a say	Conducive for skill development, potential becomes functional
3.	Mental / emotional health and personality	Temperament (inherited) has a say	To a substantial extent. Temperament is also modified/refined
4.	Attitudes, beliefs and values	To a marginal extent	To a large extent.

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Heredity does not completely determine any trait. Training and life experiences may have profound effects on many traits. Heredity influences some traits more than others. Inheritance is apparently more potent in determining one's intelligence and physique. Environment has greater influence in shaping specific habits, personality characteristics, beliefs and values. Such traits as honesty, independence, and cheerfulness are strongly affected by training. Bad environment can suppress or even nullify good inheritance. But good environment is unfortunately not a substitute for good heredity. Exposure to delinquent climate and inadequate or even vicious training withhold opportunities, build up bad habits and thus limit or even suppress the achievement of potentially able youngster. The best environment, however, cannot make a bright adult out of a dull child; more a talented person out of one without talent though good training will undoubtedly improve his performance and make the individual a more acceptable member of the society. Heredity determines what one can do and environment what he does do (within limits imposed by heredity). Heredity (nature) is like a seed, environment (nurture) is like a soil.

Educational Implications:

An exposure to the relative influence of nature and nurture to the growth and development of the human being in physical, mental, emotional and social aspects will be useful to parents, teachers, educational psychologists, curriculum makers, educational authorities and all educational thinkers. Taking extreme positions – as a hereditarian who advocates the point of view overemphasizing the influence of heredity and heredity only or as an environmentalist who advocates the point of view

overemphasizing environment and environment only will be of no use. Heredity (nature) determines, to a large extent, the physical features and intelligence of the individual. Environment (nurture) determines, to a large extent, the personality of the individual. Success in life depends more upon one's attitudes, beliefs, values, motivation, character, interests, adjustment, diligence which are influenced by environment (nurture) than upon one's physique and intelligence which are determined by heredity (nature).

Parents give their children not only heredity but environment as well. Sufficient healthcare is to be given to the child to be followed by conducive emotional climate (love and affection) and academic support. Heredity is instrumental to individual differences. Individual differences must be recognized and catered to both by parents at home and by teachers in educational institutions. The role of teacher is of signal importance since it is he who provides environment (nurture) necessary for the growth and development in physical, mental, emotional and social areas. Effective teaching and evaluation, remedial instruction, enrichment programmes, educational, vocational and personal guidance and counselling – all these are the responsibilities of the teaching community. And these are the environmental influences that facilitate optimum human growth and development.   Though it is not nature or nurture but nature and nurture, teachers can provide an effective nurture (environment) which can make the best use of available nature (heredity).

Current Trend

It is wrong to excuse our failings by blaming our Nature (bad genes) or nurture (bad influences). Our decisions today design our environments tomorrow. Mind matters. The human environment is not like weather - something that just happens. We

are its architects. Our motivation and will power determine our future. Nature is Seed, Nurture is soil; Self – Motivation is the fertilizer.

Questions:

1. Distinguish between Nature (Heredity) and Nurture (Environment) (in about 75 words)

2. What is meant by inheritance? Briefly outline the three principles of inheritance (in about 150 words).

3. Attempt a critical estimate of the relative influence of heredity and environment on human growth and development (in about 450 words)

4. Outline the educational implications of the role of Nature and Nurture on human growth and development (in about 300 words).

5. What are the implications of the current trend on Nature and Nurture for self – improvement (in around 100 words).

SECTION II

COGNITIVE BASICS

- Attention
- Perception
- Imagination
- Thinking and Reasoning
- Memory (Remembering and Forgetting)

CHAPTER 4
ATTENTION

Content outline: Attention – Factors which determine attention – Shifting, division and span of attention – Types of attention – Distraction – ensuring attention.

Attention is focalisation of consciousness on a stimulus or a pattern of stimuli. It is the awareness of responding to certain stimuli and not responding to others that constitutes attention. Attention is the process by which a certain small area of the conscious field is focussed on. Thus attention is an active process by which a selection among the stimuli takes place. When attention takes place there is always a mobilization of the various parts of the body and sense organs towards the object of attention. This is a state of readiness or set.

Factors determining Attention:

A. Objectives Factors:

-   Intensity (louder sound, brighter colour, sharper pain are attended to better when compared with weaker sound, lighter colour, lighter pain).
-   Extensity (in terms of size – a bigger patch of colour, a bigger wall poster draw our attention better).
-   Repetition (repeated advertisements, repeated requests, repeated stimuli, repeated catchwords draw our attention; if the repetition goes beyond a limit they cease to draw our attention, e.g., the tickling of the clock at our worktable).
-   Movement (which by itself is able to draw our attention. There is a deep inherited tendency to attend to moving obejcts).

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- Changes (if there is a sudden change either in intensity or extensity or even by sudden stopping – pause – we at once attend to the change in the stimulus).

- Systematic form (we attend to definite systematic pattern or rhythmic flow; some melodious tune though soft may be picked up for attention in the midst of loud noises. In the midst of lot of clumsy figures we attend to a figure with a definite geometrical and well-designed shape).

- Novelty (any thing strange or unusual whether a sight or a sound or any other sensation invariably draws our attention).

B. Subjective Factors

- Interest (attention is interest in action; interest is latent attention).

- Organic states (a hungry person may be attracted by anything eatable in preference to other objects).

- Moods (in an angry mood even small annoyances will easily be picked up and attended to. In a happy mood one may notice pleasant things).

- Affection, motivation, inner drives (a sleeping mother may not be disturbed by a lot of loud noise outside but if her sick child raises a faint cry her attention is drawn to it and she wakes up).

- Habits (we attend to certain stimuli owing to our habit; nature of our job).

No sharp division is possible between objective and subjective factors. Often the effectiveness of an objective condition may depend upon on subjective make up. There can never be a condition, which is purely objective or purely subjective.

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Shifting of Attention:

Attention shifts from one stimulus to another. Continuous attention means continuity with plenty of shifting. This process is also called fluctuations of attention.

Division of Attention:

The problem is whether one can attend to more than one stimulus at a time. It is proved that a normal individual can attend to one stimulus only at a time. Individuals who seem to attend to a number of things are actually shifting their attention from one stimulus to another.

Span of Attention:

Another interesting problem is how many figures or letters can one note in one act of attention. Normally a person can note at a glance 4 or 5 numbers or letters.

Types of Attention:

- Voluntary:

Much of attention is given because we want to do so. Motivational factors play a greater part. Attention is sustained by deliberate effort.

- Involuntary:

We suddenly attend to some intense and unexpected stimulus such as a loud noise or a bright flash of light. We attend to it because we cannot help doing so.

- Habitual:

Looking at the notice board.

- Distraction or Inattention:

There is no such process as inattention; it only means one is not attending to a specific stimulus required of his attention but to some other stimulus or a pattern of stimuli. When there is a conflict between stimuli various factors at that point of time will determine the stimulus to which attention is given.

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The motivational factors also play an important part. When one is sufficiently motivated, distractions may not have much effect.

All external stimuli need not be distracting. Experiments on the effect of recorded music as accompaniment to work in factories showed signs in favour of production. The best way to fight against distraction is to get used to it.

How to ensure attention?

A knowledge of the psychology of attention will help the teacher in ensuring attention of the learners in the class room. The teacher should have a good speaking voice well modulated. The teacher should be thoroughly prepared for the class. There should be adequate student involvement in the class room. The teacher should employ a variety of instructional strategies – lecture, discovery and discussion. The teacher should employ technology-based instruction and use audio-visual aids effectively. The teacher should survey the whole class through eye contact to establish a sense of belongingness with the whole class. These are some of the practical tips to ensure attention in the class room.

Questions:

1. What is meant by attention (in about 75 words)

2. Identify and briefly outline factors which determine 'Attention' (in about 300 words)

3. Briefly explain the terms 'Shifting of attention', 'Division of attention' and 'Span of attention' (in about 150 words)

4. What are the different types of attention?(in about 75 words)

5. What is meant by distraction (inattention)? How will one fight against distraction? (in about 150 words)

6. How will you, as a teacher, ensure attention of your students (in about 150 words).

CHAPTER 5
PERCEPTION

Content outline: Perception – Factors which determine perception – Errors in perception – Apperception – Educational significance of perception.

The first step in cognition is sensation. Sensations are the impressions received through sense organs. Sensations are the foundations of all knowledge. Through sensations one becomes aware of the world around. Sense organs are the gate ways of knowledge. Sensation is the most elementary mental process. It is only a primary response.

Perception is a meaningful interpretation of a sensation. The meaning we attach to what we sense (seeing / hearing / smelling / tasting / touching) is called perception. In other words perception is sensation plus meaning. Perception is an organizing process. It does not operate like an adding machine. Impressions are not cumulative but the mind interprets and integrates what it receives. Two artists do not see the same thing in a picture. Witnesses give different reports on an accident. Perception depends upon the age, gender, intelligence and background of experience of the individual.

Factors which determine perception

- Sense organs:

Sense organs and the nervous system determine our perception. Sense organs and the central nervous system (the brain and its accessories) should be in perfect order for clear, meaningful perception.

- Past experience:

A burnt child perceives fire with fear. An individual involved in an accident will perceive heavy traffic apprehensively.

- Immediate Attitude or Set:

A runner in a 'get set' position perceives a pistol shot in any sound similar to it. A person expecting a guest will perceive that individual when he hears a knock at the door.

- Social Stereotypes:

Certain undesirable traits in a particular community or caste or professional group can easily be proved to be the results of certain negative attitudes we have developed towards them based on hasty generalizations. Under such circumstances we ignore a great deal of reality.

- Signs in Perception:

Symbols are stimuli which stand for objects (a name for a person, a word for a concept). Signals, or the other hand, have a more realistic and inevitable connection with their meanings. The signal of an object is typically some stimulus received from the object. Smoke is a signal for fire. The word fire is a symbol for fire. The humming sound is a signal for an aeroplane in motion. The child learns to take a smile as a sign of good humour and a scowl as a sign of crossness. A good share of child's early self-education consists of observing how people behave under different circumstances and in learning to perceive their attitudes and purposes from their behaviour signs. This is what is called social perception.

- Reduced Cues:

Some signals may be very unsketchy in comparison with the whole object. Just a brief glimpse, a whiff of odour, or a snatch of a sound will be enough. Such cues save time and energy but they may, at times, lead to mistakes in perception.

- Ambiguous signs:

Stimuli, like words, will have different meanings because of their ambiguous nature. In driving a car during nights, what seems to be a diversion of the road may soon reveal to be

something else. Noises are often ambiguous. Thus there will be visual ambiguity as well as auditory ambiguity. Ambiguity may also be manifest in other sensations.

Errors in Perception:

- Illusion:

Illusion is a wrong perception or mistaken perception. Illusion is confused or misinterpreted perception. The classical example is our perception of a coil of rope in darkness as a snake. This is visual illusion. There are illusions in case of other sensations also.

X   Y
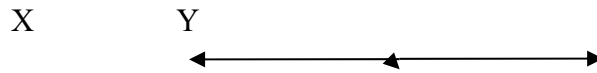
Muller – Lyer Illusion
X is not longer than Y (X = Y)

X
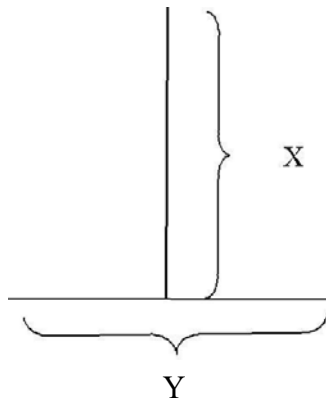
Y
Horizontal – Vertical Illusion
X is not longer than Y (X = Y)

Hallucination:

A hallucination is a false perception. This is a concept often associated with abnormal psychology and psychiatry. A person

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who hears voices or sees mystic signs in the sky is suffering from hallucination (e.g. seeing a ghost, talking to spirits).

Apperception:

Apperception is self consciousness of knowledge. It is higher developed stage of perception. It is the contribution by the individual's mind in the form of past experiences, active impressions or tendencies to the interpretation of sensory excitation received from any one particular object or situation. The stock of ideas which help recognition, assimilation and interpretation is called the apperception mass.

Educational Significance of Perception:

A large part of our learning is accompanied by perception. Without perception, the higher-level cognitive processes such as imagination, thinking, reasoning and problem solving will not function. Memory largely depends upon one's apperception mass. Perception furnishes the experiences that promote understanding and reflective thinking. It is true that we learn through perception. It is equally true we learn to perceive. The relation between sensory experience and its meaning is mainly a product of learning. We not only perceive objects but also perceive symbols representing objects or concepts. The spoken word, the printed word, the number code constitute symbols. They have a meaning of higher order since they signify facts beyond themselves. They become more definite, refined, and specific. Perceptions are modified by the activities themselves – by trial and error methods. It is enhanced by needs, motivations and value systems. That is why nature study, field trips, laboratory work have now become supplements to learning. It is more important to learn the moods and motives of people by perceiving their behaviour signs, facial expressions, their words and so on. Some persons are very

sensitive to social stimuli but many are ignorant. This is due to lack of training in social perception at home, in the peer groups and in the school. Training in social perception is as important as in the perception of objects or events. The chief characteristic of a scientist which he acquires by training is the maintenance of an attitude free from personal bias when he sees to discover facts by observation. Observation is regulated perception – disciplined perception – perception of critical incidents or behaviours. The scientist uses instruments to extend the limits of sense organs. We can find the perceptual training and its results in the alertness of the proof reader and in the laboratory work of a good student of science. In every field of human endeavour the expert is the person who is well trained to make observations, which are keener, more critical and more analytical.

Questions:

1. What is meant by perception? (in about 150 words)
2. Identify factors which determine perception (in about 300 words)
3. Distinguish between Illusion and Hallucination (in about 150 words)
4. What is meant by Apperception? (in about 75 words)
5. Outline the educational implications of 'Perception' (in about 300 words)

P.S.

This chapter deals with Sensory Perception. In Psychology, 'Perception' also implies Cognitive reaction. Job Perception means how the Job Performer views his job and how he reacts to it. Such a reaction leads his attitude towards his job.

Perception is cognitive reaction. Attitude is 'affective' reaction. In Social Sciences Research, the term Perception implies Cognitive reaction.

CHAPTER 6
IMAGINATION

Content outline: Percept and Image – Imagination – Types of Imagination – Values of Imagination – Educational significance of Imagination.

Image:

Percept is a picture an individual develops in response to a sensory stimulus (by employing one or more sensations). Suppose a child sees a car for the first time in its life. The child may use more than one sensation to get a picture of the car-seeing, hearing (the horn is sounded; there are mild vibrations in the car), smelling (the paint of the car), touching (the various parts of the car) and so on. This picture is called percept (picture based on perception). When the child is physically away from the car, a mental picture of that car is drawn from its memory and it is called an image. Images are mental pictures formed without corresponding (in the absence of) sensory stimulations.

We have memory images of all sorts of experiences relating to different sensations. We have images of the shape and form of an object, the voice of a person, the smell of a flower, the taste of our favourite sweet, and the pain experienced by our body. A memory image may not be so strong or clear as a percept. Individuals differ in their capacity to form images. Even the same individual may not be equally good in forming images relating to different sense experiences.

The individual differences in forming images lead some psychologists to think that people can be divided into groups according to their dominant types of imagery; those who belong to visual group-visiles and those who belong to auditory group-audiles. However, it is now realized that individuals cannot be placed in categories this way, because most of us are mixed in type. It all depends upon situations and the individuals. There are extreme cases, no doubt, those having predominantly strong image

of one kind – visual imagery or auditory imagery. Musicians usually have a strong auditory image; artists usually have a strong visual image.

Imagination:

Imagination is a cognitive experience in the absence of actual sensory stimulation. This process involves the recall of past experiences and events in the form of memory images and arranging them in patterns that are already familiar or sometimes arranges them in new and strange ways to produce new combinations (the legendary mermaid – half woman and half fish). Thus, imagination is mental organisation of memory images in some meaningful, purposeful sequence.

Type of Imagination:

Imagination
- Imitative (Reproductive)
- Creative (productive)
  - Pragmatic
  - Aesthetic
    - Artistic
    - Fantastic
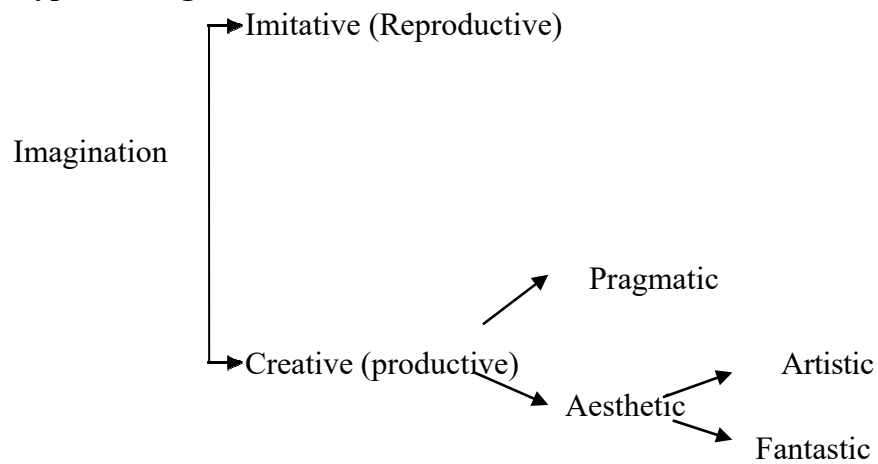
Imagination can be classified into two major types: Imitative (reproductive) and creative (productive). Imitative imagination is self-explanatory. Here the individual merely organises his memory images (based on his past experience) in

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some form depending upon his immediate purpose. Creative imagination can be further classified into pragmatic and aesthetic. Pragmatic imagination is utility-oriented. It is governed by outside control. Theoretical aspect of pragmatic imagination is manifest in the work of a mathematician or a problem solver. Practical aspect of pragmatic imagination is manifest in the work of a practical scientist, an architect or any engineer. Aesthetic imagination has no outside control. Aesthetic imagination can be further classified into – Artistic and fantastic. In artistic imagination, some controls are applied by the individual (novel writing, composing a poem, drawing a picture – purpose is clearly defined). In fantastic imagination there are no controls – a free play of imagination (day dreams, and reveries). Fairy tales, stories and pictures involving giants, magicians and like are the result of fantastic imagination.

Values of Imagination:

With the help of this man is able to invent new things, produce fine works of art. This is useful in thinking, reasoning and problem solving. It serves as a guide to action. Individual gains advantages in planning and for seeing the desirable and the undesirable. It arouses a sympathetic attitude and empathy in human relations. Through imagination one can understand the misery of others and help them. It is a powerful source of enjoyment. We desire pleasure in visualising circumstances through which our ideals, dreams and wishes are happily fulfilled.

Educational Significance – Guidelines to the Teacher:

Teach the learner how to perceive things clearly and effectively; provide for him an abundance of stimulating experiences. Training in perception is very effective for imagination. Teach the learner how to interpret his perceptions in various interesting ways. Teach the learner to choose stimulating experiences, present him good books, pictures, journals and magazines which stimulate and challenge him in the right direction

(socially desirable direction).

Create an atmosphere for fertile imagination-good music, art and literature; periodically expose the learner to interesting stories filled with imagination; encourage the learner to tell stories before a peer group or write stories for the class/school magazine; make the learner complete incomplete stories using his imagination; Dramatise certain situtations if and when possible; Assign the learners roles in plays / dramatic situations that will enable them to imagine the behaviours of their roles-characters assigned to them.

These guidelines are equally applicable to parents and other elders in charge of the learners.

Questions:

1.   What is meant by Image? In what way is it different from 'Percept' (in about 150 words)

2.   Distinguish between 'audiles' and 'visiles' (in about 75 words)

3.   What is meant by Imagination? (in about 75 words).

4.   Identify and briefly explain the different types of imagination (in about 150 words)

5.   What are the values of Imagination? (in about 150 words)

6.   Briefly outline the educational implications of 'Imagination'.

Ps.

There are individual differences in 'imagination' as a cognitive process. Prospective Mathematicians scientists and engineers evince pragmatic imagination. Prospective writers evince aesthetic imagination. 'Imagination' is an essential cognitive aspect of creativity. A resourceful teacher can identify students of promise in the fields cited above and provide available opportunities for their enrichment.

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CHAPTER 7
THINKING AND REASONING

Content outline: Thinking – Concept – Language – Reflective and creative – Errors in thinking – Autistic and prejudiced – Reasoning – Inductive, deductive – syllogism.

Thinking is imagination directed towards a specific purpose of finding relationships among memory images. This superfaculty distinguishes human being from infrahuman beings. The present scientific advancement, economic development, social advancement, intellectual enrichment have been largely due to thinking minds of the globe. Thinking is the process; thought is the product.

Formation of clear concepts will facilitate thinking. Concept is the sum total of what one knows of an object depending on one's ability to form general ideas – the basic idea of an object. The concept of any object is what that object means to the individual. Concepts are formed based on percepts. Exposure to a variety of percepts (examples) will enable the learner to form a clear concept. The learner gradually moves from concrete concepts to abstract ones. Here comes the importance of language.

Language plays a vital role in conceptual thinking. When we form concepts from the analysis of perceptual experiences and label them by means of words we use language. Without language we cannot form concepts such as liberty, justice, goodness and the like. Since language is a means of communication, it helps us in the formation of concepts and, in turn, facilitates thinking.

The two forms of thinking are – reflective and creative. Reflective thinking is giving consideration to and calling up all the experiences relevant to the solution of a current problem. Creative thinking is projecting experiences so that new ideas may result (e.g. construction of space craft). In reflective thinking, there is an immediate difficulty or problem. But in creative thinking, there is

no immediate difficulty or problem. The individual concerned foresees a problem and starts thinking of its solution.

Errors in Thinking - Autistic:

This is opposed to realistic thinking. It is a form of thinking where the guiding factor is one's own satisfaction as in the case of day dream which does not take into account realities. In other words, it is wishful thinking.

- Prejudiced:

There are times when our thinking is influenced by emotions like anger, fear, hatred etc. (rather than by logic). When we do not like a person, we are likely to believe uncomplimentary things about him which may not be really true. Another outcome of such prejudiced thinking is hasty generalization.

Reasoning:

The application of logic to thinking is called reasoning (logic is the science of correct thinking). Reasoning is directed towards arriving at definite conclusions or inferences. Reasoning may be inductive or deductive. In inductive reasoning the learner, after observing several particular cases arrives at a general conclusion about those cases. The learner is exposed to a variety of triangles (acute, obtuse, right, scalene, isosceles, equilateral) of different sizes and then he arrives at a general conclusion that a triangle is a simple closed figure formed by three line segments called sides and the sum of the three interior angles is equal to 180. In deductive reasoning the learner tests a particular case from a general conclusion. The general conclusion about the sum of the

interior angles is 180. The learner applies this to a particular triangle (given the sizes of two angles -70, 60, to find the size of the third) and concludes that the third angle measures 50. A common form of deductive reasoning is syllogism. It consists of three statements – a major premise (general statement), a minor premise (a specific observation) and a conclusion (inference).

For example:

Major premise -   All men are mortal
Minor premise -   Socrates is a man
Conclusion   -   He is mortal.

Syllogism has its limitations. When a major promise is either incomplete or when a minor promise is not relevant (when logic is given a mild tilt or slant) we are likely to arrive at wrong conclusions. We must be cognitively vigilant (intellectually alert). Here are two examples:

All poets are learned (major promise)

Most professors are not poets (minor promise)

Most professors are not learned (conclusion)

(All poets need not be learned. Even if all poets are learned it does not imply that non-poets are not learned).

What is universally believed is true (major premise).

The existence of God is not universally believed(minor premise)

Therefore it is not true (conclusion)

(What is universally believed need not be true).

Questions:

1. What is meant by 'Thinking'? (in about 75 words)
2. What do you mean by 'Concept'? (in about 75 words)
3. What is the role of 'Language' in 'Thinking'? (in about 75 words)
4. Distinguish between Reflective thinking and Creative thinking. (in about 150 words)
5. Distinguish between Autistic thinking and prejudiced thinking (in about 150 words)
6. What do you mean by Reasoning? (in about 75 words)
7. Distinguish between Inductive Reasoning and Deductive Reasoning (in about 150 words).
8. Briefly explain and illustrate syllogism. What are the limitations of syllogism? (in about 300 words)

CHAPTER 8
MEMORY
(Remembering and Forgetting)

Content outline: Remembering – Memory Trace – Marks of good memory – Memorising – Overlearning – Study of memory – Forgetting – Causes – Ebbinghaus' experiments.

Remembering

The individual comes across a variety of experiences. Some of them are well attended to by him. These go from the conscious level to the subconscious level. Memory means the capacity of the individual to bring back or recall to mind or consciousness a past experience. Memory consists of registering, retaining and remembering. Registering is recording of impressions received. Retaining is conserving past experiences (it is inactive). Remembering (active) consists of recalling (reproduction of past experiences) or recognizing (identifying experiences as the ones already exposed to).

Registration is fixation of materials learnt. This fixing process depends upon factors like attention, interest, intelligence and age; very young children and very old persons cannot fix ideas effectively in their minds. Retention depends upon registration. Retention, being inactive, can be tested only by recalling or recognizing. Recalling may fail owing to several factors – hysteria, shock, accidents, injuries, stress, emotional blocking, brain damage, which results in aphasia (loss of vocabulary) or amnesia (temporary loss of memory). Recognition is a feeling of the experience of the type, - "Oh! Yes! I know it". There are two errors in recognition: a feeling of strangeness amidst familiar objects (may be due to emotional blocking or amnesia; - a false of feeling of familiarity (para-amnesia – dejavu (already seen) experience).

Memory Trace:

What exactly is the mechanics of retention? It is generally believed by psychologists that the phenomenon of memory is possible because of memory traces – structural modifications of the brain. These traces are similar to impressions or marks on a plastic substance. Once these traces are recorded they need not continue to exist in the original form. Variations may occur. Many memory traces may even disappear or get altered. Memory traces cannot be observed directly. It is an inference - a hunch framed to explain the fact that the effects of learning persist over time. Neuro surgery produces ample evidence to show that the stream of conscious experience, while flowing forward, leaves behind a permanent record of all waking moments of one's life. Experiments with artificial, electrical stimulation of the brain show that this pathway is located mainly in temporal lobe. When certain points in the temporal lobe are artificially stimulated, conversations once made, songs heard years ago are faithfully reproduced in proper sequence.

Marks of Good Memory:

In a good memory the four factors function harmoniously (Registering, Retaining, Recalling and Recognizing).

Marks of good memory are:

- rapidity in learning: the learner with a good memory will learn his lessons quickly; he is able to save time and energy.
- Length of time: he is able to retain the materials for a relatively longer time. Here time refers to the one during which the power of recalling and recognizing works best without being refreshed. An individual with a good memory is able to remember things without reviewing them for a relatively longer time.
- Promptness with which materials learnt are remembered (recalled or recognized).

- Accuracy which is manifest in the process of remembering (recalling or recognizing).
- Serviceableness: good memory is selective and directed towards a purpose. Individuals gifted with good memory usually remember things which are useful to them. Good memory is utility-oriented.

Memorizing:

We sometimes do learn with a specific purpose of remembering what is learnt by way of one hundred percent faithful verbatim reproduction. It means active learning of the material by the learner. It is also referred to as learning by heart Learning by Heart is a misnomer. We learn by Head. When the learning materials appeal to our – Heart we learn more effectively. The material learnt becomes a relatively permanent part of the learner and he is in a position to use that knowledge whenever required.

Meaningful Learning:

Memorising is often done by using the method of repetition, rote learning. Repetition, though absolutely necessary, in the process of memorising, has to be done judiciously. Mere repetition without paying attention to the meaning and significance of the material is ineffective way of learning. By dint of rote learning we may be able to memorise the material but it has limitations. It may not be remembered long. Mere mechanical repetition will not lead to memorisation. An intelligent logical repetition creates meaning in the subject matter and thus helps in memorising.Only meaningful learning facilitates meaningful memory.

Spaced Vs. Unspaced Practice:

Distributed Vs. Massed

When a fairly large amount of material has to be memorised what is the best method to be adopted? Should an individual try to master the assignment in one continuous sitting or

should he distribute his practice over a period of time with intervals of rest or other activity. Memorisation ought to be spaced. The material to be committed to memory should be repeated at intervals with periods of rest.

When there are intervals between the attempts of learning, the material gets fixed in the mind of the learner. If learning a long assignment is attempted in one sitting, naturally the factor of fatigue sets in. Intervals reduce fatigue and hence every attempt is supported by fresh vigour. In a continuous sitting for a long time, the law of diminishing returns (Economics) is bound to operate. Motivation cannot be kept high throughout the period. This affects enthusiasm and concentration. In case of intervals each attempt is characterized by new vigour and enthusiasm. When the mental battery gets discharged it has to be recharged.

Part Vs. Whole Method of Memorising:

Whether to memorise a lesson as one whole unit or to divide into small units and memorise each part separately is one problem. It is found in general, the whole method is more effective than the part method. When an assignment is very long, a division into smaller units may become a necessity even for an adult. Hence the choice between the whole and the part method depends upon the learner's capacity to learn and the size of the material. In the whole method the meaning and the significance of the material are grasped. It has been suggested as a practical hint that even when part method is adopted, it is better to divide the material into small units each of which, to some extent, functions as a meaningful unit and read it through the whole assignment now and then so that the meaning of the whole assignment can be kept in mind.

Overlearning:

Repetition and recitation help one in memorising materials. Even after one gets a feeling of mastery over an assignment it is better to repeat the material a few times more to ensure a stronger,

longer retention. Such an extra amount of repetition is called over learning.

How to remember better?

How to register:

- There must be a want to learn. (An interest and motive)
- One should pay close attention to and concentrate on that which is being learnt.
- Perception and understanding should be clear.
- Questions should be asked to clarify any difficulty or doubt.

How to retain:

- One must go over and repeat that which has been learned.
- One should reflect on it and initiate discussion with other learners.
- Drill may be effectively used to fix it in mind.
- Mnemonic devices may be employed (VIBGYOR for colours in the rainbow and the like).
- Associate the new materials with the old ones.
- Materials to be organized in large units; not in isolated bits or fragments.

Methods of Studying Memory:

The effectiveness of fixation of retention cannot be determined directly but, of necessity, be measured as recall or recognition.

Memory Span:

One of the simplest ways of determining the effectiveness of immediate memory (fixation) is to test the memory span. This refers to the maximum amount of material that can be correctly reproduced after a fixed number of presentations. Memory span materials normally consists of numbers (digit span) words, figures. The apparatus employed is called Memory Drum.

Savings Method

This is learning – relearning. The learner learns a lesson to a point (or mastery) where he can recite it correctly. The time taken and the number of entire readings are recorded. After a time interval he relearns the unit and the time and the number of complete readings are recorded. The saving is the difference between the original learning time and the relearning time. (If 10 readings are required for the original learning and 7 are required for relearning then the saving is 3 readings or $3/10 = 100 = 30\%$).

Paired Associates:

In this method the material to be learned consists of pairs of words, non-sense syllables, pictures, forms or colours. These pairs are to be learned together so that when one member of the pair is flashed the subject should recall the other

e.g.

Boy - White	Light - Blue	· ̲ (first presentation)
Boy -	- Blue	̲ (second presentation)

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Each frame is presented for about 3 seconds – sometimes more than once. It is found that a normal adult can recall around 15 of 20 paired associates. It is interesting to find that when the second stimulus is presented and the subject is expected to give the first usually a normal adult recalls around 2 out of 20 paired associates.

Total Learning Method:

This is a flexible method which can be used with non-sense syllables, list of words or prose passages. The subject's memory score, the time taken by him to learn the unit by heart or the number of ideas he can recall after one or more readings of a passage.

Forgetting:

Forgetting means failure to recall or recognize an idea or a group of ideas. It is the failure of the individual to revive in consciousness an idea or a group of ideas without the help of the original stimulus. Forgetting is not wholly a disadvantage. In learning we have to make a selection of relevant and essential materials. If irrelevant and non-essential materials are forgotten, relevant and essential materials may be retained and remembered. According to one school of thought, "learning is judicious forgetting" (Memory implies: We must remember what we ought to remember and we must forget what we ought to forget but the irony is around 50% of us remember what they ought to forget and forget what they ought to remember.

Causes of Forgetting:

Atrophy through disuse; distractions; doubts; fatigue (physical or mental); emotional disturbances; unpleasant mode of experience or thought. It is often found that students forget a deal

soon after their examinations. Most of the material learnt in schools or colleges are forgotten. Not all materials leant or memorised are wiped out over a period of years. But much is forgotten if not reviewed. Of course there are individual differences in the power of retention. Here is a humorous statement: 'A good (academically) student forgets the learning materials soon after the examinations; A poor (academically student forgets his learning materials just before the examination 'knowledge' ought to be experienced. Then only it will be remembered ; it will be facilitate sound and meaningful 'Memory'.

Personal experiences may be recalled by association. Since they are surrounded by feelings and emotions, they are not forgotten easily. An adult may remember some of his striking childhood experiences and still forget much of what was learned in his childhood or even later. The course of forgetting takes a definite trend. It is most rapid in the beginning and then slows down.

Ebbinghaus' Experiments

Ebbinghaus conducted experiments to determine the rate of forgetting. He assessed the amount retained at specific intervals like the first, the second, the third, the fourth day and so on. The results were plotted in a curve. It was seen that at first forgetting was rapid and as the time lapsed the rate of forgetting became slower and slower.

It is generally found within the first 24 hours about 65% are forgotten. After the second day the curve is almost horizontal showing that as each day passes only a marginal amount is forgotten. At the end of the second day the loss is about 75%.

Ebbinghaus' Curve of Forgetting:
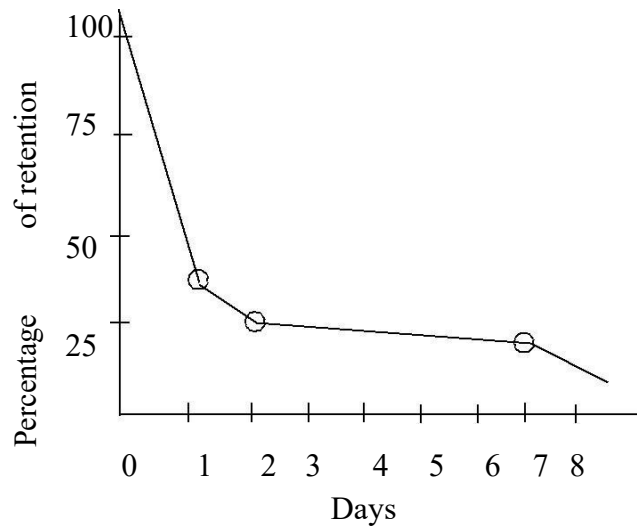
Interference

    Psychologists recognized the influence of intervening activities in interfering with remembering.

    According to proactive inhibition previous learning disturbs and interferes with the recall of present learning material.

    According to retroactive inhibition, new learning (current / present learning) disturbs and interferes with the recall of previous learning materials.

    These two processes may be applicable to rote memory and memorization of meaningless materials. If learning or memorization is meaningful, purposeful and adequately motivated these two types of inhibitions are not likely to function.

Questions:

1. What do you mean by remembering? (in about 150 words)
2. What is 'memory trace'? (in around 150 words)
3. What are the marks of a good memory (in about 150 words)
4. What is meant by 'Memorising'? Identify and explain the different types of memorising. (in about 450 words)
5. What is overlearning? (in about 75 words)
6. Identify and explain the different methods of studying memory (in about 300 words)
7. What is meant by forgetting? (in about 75 words)
8. What are the causes of forgetting (in about 150 words)
9. Briefly outline the implications of Ebbinghaus experiments on forgetting (in about 300 words).
10. Distinguish between Proactive inhibition and Retroactive inhisition (in 75 words).

Ps.

'Memory' plays a vital role in our daily life. It leads to success and Happiness. 'Memory' is one of the vital factors of 'Intelligence' (General Mental Ability). Memory refresher techniques may be effectively employed Checklists, Confidential information essential data, instructions and guidelines uploaded in your 'system' (Computer / laptab) will facilitate one's effective Professional Performance. This will eliminate the old method of taxing one's brain by over load of data.

SECTION III
AFFECTIVE BASICS
- Instincts
- Feelings
- Emotions
- Mimesis

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CHAPTER 9
INSTINCTS

Content outline: Instincts – McDougall's list – Modification of instincts (inhibition / hedonic selection / exhibition / sublimation) - Educational significance of instincts.

According to one school of thought instinctive behaviour is the key to understand human behaviour. An instinct is a native, inborn, innate tendency for action. Most of animal behaviour, especially that relating to growth and development is found to have certain definite characteristics. Such a behaviour is rigid and uniform. There is no evidence to show that the organism has been taught such a mode of behaviour. The migration of birds, selecting food, sensing danger have all been ascribed to this innate propensity (drive or impulse). Extending this hypothesis to human behaviour, Mc Dougall identified a list of instincts responsible for human behaviour. The following are the most prominent ones:

1. Escape	8. Submission
2. Pugnacity	9. Self-assertion
3. Repulsion	10. Gregariousness
4. Parental	11. Food-seeking
5. Appeal	12. Acquisition
6. Sex	13. Construction
7. Curiosity	14. Laughter

Modification of Instincts
Principles of Inhibition

If any evil tendency is checked for a given period of time, it may disappear. Environment may be controlled so that it does not find its expression and it fades away. Situations which are likely to lead children to undesirable behaviour are to be avoided.

This is a negative training. If an instinct is not used it does not mean it dies away, it may express itself with more vigour later

Principle of Hedonic Selection

Modification of instincts takes place through the agency of pleasure and pain. Desirable modes of behaviour are associated with pleasure and the undesirable ones with pain.

Sometimes there may be no connection between the wrong done and punishment given. Children do not understand, at times, the cause of punishment; the child rebels against people who punish and develops a distaste for work.

Principle of Freedom (Exhibition)

The child may be allowed full freedom for the display of constructive behaviour. He may grow and develop in a natural way. He may be educated well through creative self-expression and self-activity. The child may also develop a civic sense. He may realise what type of behaviour is desirable.

Absolute freedom may not be desirable. Some form of restriction may be necessary. Freedom in the expression of instincts may lead to cultivation of undesirable habits which may be difficult to break later on

Principle of Sublimation:

The instincts of the child should neither be suppressed nor given a free play. They are to be directed into healthy channels. It is a process of redirecting an instinct from its primitive goal to the one that is socially and individually uplifting. It also involves a change of ideas and attitudes of the individual from irrational to rational ones. The instinct of pugnacity may be sublimated by healthy group competitions and games.

Educational Significance

Every instinct has a force behind it which impels the individual to act in a certain way. The knowledge of instincts will enable the teacher to the understand the behaviour of his students

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better. His work will be to sublimate and purify them towards

formation of healthy character. Study of instincts enables the teacher to bring about better coordination between the learning process and instincts of the individual. It will enable the teacher to the understand some of the problems related to the student population. The problem of indiscipline may be due to self-assertion and stealing due to acquisition. The teacher is able to adjust his methods of teaching to suit the instinctive development of the child. Activity methods, learning by doing, play way and project-oriented method have come out as a result of the study of instincts. It also enables authors to prepare text books according to the age groups.

Current trend:

Psychologists of the day observe that characteristics of human behaviour do not comply with instinctive behaviour. Man does not seem to have any of these instincts in a rigid and stereotyped form as found in animals. Modern psychology uses terms like innate propensities, unlearned motives, biological drives and such other terms to explain human behaviour. Instinctive behaviour is not considered to be cultured behaviour. Instinctive behaviour is infrahuman behaviour.

Questions

1. What is meant by instincts? (in about 75 words)
2. Identify the prominent instincts identified by McDougall (in about 75 words)
3. Attempt a critical estimate of the different methods of modifying instincts (in about 300 words).
4. Outline the educational significance of instincts (in about 150 words)
5. Instinctive behaviour is infra human behaviour'. Discuss (in about 75 words).

CHAPTER 10
FEELINGS

Content outline: Feelings – Affectivities – Feelings and sensations – Tone of feeling – Rating scale of feeling – Bipolar rating.

Feelings (technically known as affectivities) accompany complexes of sensation which are judged to be more or less pleasant or unpleasant. Sensations differ from feelings in that they range along a scale of intensity from 'strong' to weak' whereas feelings range along a scale from pleasantness to unpleasantness through a point of indifference.

Sensation:Strong   <u>neutral</u>   Weak

Feeling:Pleasant <u>indifferent</u> unpleasant

Sensations are localised (for every sensation there is a corresponding sense organ). In most affectivities (feelings) the whole organism is involved; they are not restricted to a single sense organ.

The tone of feeling is often judged along a rating scale. The degree of pleasantness or unpleasantness depends upon the intensity of the stimulus. The general principles of relativity in feeling tone can be observed in a variety of social experiences. Thus in a strange city we are pleased to meet some one we know even though ordinarily we are quite indifferent to that person. According to an experimental study the following are the common annoyances felt by people: offensive behaviour of others; interrupting, bragging (boasting), nagging (non-stop fault finding), bullying (frightening others by misusing powers), physical characteristics of people (general appearance, deformities,

gestures, grimaces and other mannerisms which they cannot change are located lowest on the scale of annoyances).

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The theory of feeling is that it operates on the tri-dimensional scale (pleasantness – indifference – unpleasantness). Another theory states that the feeling tone not only ranges along this dimension but also moves in two other affective dimensions between the poles of excitement – relief and the poles of tension – calmness.

Rating of feelings through bipolar attributes:

Pleasant_____unpleasant
Excited_____relieved
Tense_____calm

Questions:

1. Distinguish between feelings and sensations (in about 75 words)
2. How is the tone of feeling rated? (in about 75 words)
3. Identify the common sources of annoyances (in about 75 words)
4. How is the tone of feeling rated through bipolar attributes? (in about 75 words)

<u>**P.s.**</u>

Only when the emotional climate of the classroom is conducive learning will be effective. The feeling tone of the classroom ought to be pleasant and calm . A resourceful teacher creates a conducive classroom climate and makes his students feel at home before he starts presenting his lessons.

CHAPTER 11
EMOTIONS

Content outline: Emotion – Emotions and Instincts – Causes and effects of emotions – Primary emotions – Education of emotions – Educational significance.

Mc Dougall furnished a list of 14 instincts and 14 corresponding emotions. But most found in the list are in the nature of persistent attitudes rather than emotions.

SI.No	Instincts	Emotions
1.	Escape	Fear
2.	Pugnacity	Anger
3.	Repulsion	Disgust
4.	Parental	Tender Emotion
5.	Appeal	Distress
6.	Sex	Lust
7.	Curiosity	Wonder
8.	Submission	Feeling of inferiority
9.	Self assertion	Feeling of superiority
10.	Gregariousness	Feeling of loneliness
11.	Food – seeking	Gusto
12.	Acquisition	Feeling of ownership
13.	Construction	Creativeness
14.	Laughter	Amusement

Emotion is defined as a stirred up state of the organism. In all emotions there is a strong disturbance of the whole organism. There are strong internal changes (pulserate, heartbeat, butterflies in the stomach) and definite external changes (shivering of the whole body, biting of teeth, high pitch of voice, lack of clarity of speech). It is complex involving all psychological phenomena except thinking and reasoning.

Emotions mostly occur when any basic need is blocked or challenged or when a such a need is satisfied. Fear is a response associated with expected danger. Anger is a response when some activity is blocked. Joy is felt when a need has been satisfied.

Even in the most disturbing or challenging situations, if we face the problem through reasoning, emotion does not surge up. The emotional response is always weakened by the application of reasoning. Reasoning blocks emotion and emotion blocks reasoning.

Unlike feelings, emotions are strong in intensity. So any emotional experience, even after it ceases, leaves behind a kind of after feeling called mood. After one has had an outburst of anger he will be in an angry mood for quite sometime. He is likely to become angry again even with the slightest provocation when he is in such a mood. After an intense fear of anger, one is likely to be in a frightened mood for quite sometime and any unexpected movement or event will make him afraid again.

Emotions cause striking bodily changes such as facial expressions, muscular adjustments, gestures and movements, change of voice (higher pitch when angry, lower sinking pitch, hair standing on ends when frightened). Stimulation of sweat glands, drying of the tongue, unusual amount of energy (super human energy) at our disposal to meet any emergency, increase in heartbeat, pulse rate, breathing problems, shooting up of blood

pressure and the like. If such changes, frequently occur, they will affect the health of the individual. People who become emotional frequently will have problems related to health (physical and mental).

The five primary emotions are fear (as a response to loud noise, hurtful stimuli, loss of support), love (initiated by petting and fondling), anger (when activities are interfered with), joy (when a need is satisfied) and grief (when a need remains unsatisfied).

Education of Emotions:

Extreme emotionality affects the personality of the individual; it disturbs emotional equilibrium. To attain emotional balance, it is necessary the individuals should have control over their emotions. A free play of emotions cannot be permitted in a society.

Suppression of emotions will lead to mental and emotional disorders. Inhibition is not the remedy for training of emotions.

Expression of pent up emotions will relieve the individual of his emotional load.

Sublimation is the redirection of emotions into healthy channels.

If individuals are kept preoccupied with some useful activity such a mental occupation will prevent them from meeting emotional situations.

Individuals are to be provided with adequate opportunities for their emotional release (catharsis) (festivals, fairs, social functions, get-togethers and such other cultural activities).

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Educational Significance:

The teacher should appeal to the higher emotions of the student, make life worth living. The finer emotions of the child may lead him to some creative work. Strong emotions may injure the personality of the child. Growth and development of finer emotions leads to formation of good character.

To maintain emotional balance, unpleasant situations are to be avoided. Counterattack intensifies emotion; opportunities for emotional release are to be provided; good habits, good hobbies and impersonal interests are to be cultivated.

Questions:

1. What is meant by emotion? (in about 75 words)
2. How are emotions related to instincts? (in about 75 words)
3. What are the causes and effects of emotions? (in about 150 words)
4. What is meant by mood? (in about 75 words)
5. Identify primary emotions of human beings. (in about 75 words)
6. Identify the different methods of educating emotions (in about 150 words).
7. Outline the educational significance of emotions (in about 150 words).

PS .

Emotional balance is a significant personality trait that leads one to ' Success and Happiness' 'Emotional balance' cannot be taught through 'lectures'. It is caught from others – Parents, close relatives and to a great extent from Teachers who are loved by students for their effective and lively classroom presentations. A good teacher is not only an efficient in teaching but' emotionally poised' as well.

CHAPTER 12
MIMESIS

Content outline: Mimesis – Imitation – Sympathy – Suggestion.

Sir Percy Nunn used the term mimesis to refer to the general tendency of an individual who takes over from others their mode of actions, feelings and thoughts.

Imitation:

It is doing as others do. It is not blindly following what others do. It is emulating their desirable behaviour. It may be unconscious (spontaneous) or conscious (deliberate), it is a powerful source of acquiring habits, manners or patterns of behaviour (socially approved) and acquiring ideals and standards of life. It is a great socialising agent. The individual gets into social heredity and helps in conserving customs, cultural standards, the entire culture of the community. The teacher has a great responsibility. He should set a worthy model for himself and inspire his students to emulate desirable modes of behaviour. The student population must be exposed to rich challenging experiences of high achievers. Biographies of great men, scholars, scientists, striking anecdotes are to be read by the teachers and shared with the students. The student population is in need of good role models (for emulation) in every area of human experience / field of human enterprise.

Sympathy:

It means the process of feeling for others – the willingness to share the feelings of others, it is a social tendency. Gregariousness brings individuals together to form a social group and thus makes social evolution possible. Sympathy is unquestionably a consolidating source of social solidarity in an organized community. Sympathy is a great human powerful value.It is first learnt by the child at home and later consolidated in

the school, peer group and later in a social setting. It is learnt not directly (consciously) but indirectly (unconsciously) in the form of concomitant learning. Home climate, peer group climate, the classroom climate and campus climate must be conducive to cultivating sympathy as a basic human value.

Suggestion:

Thinking as others think is known as suggestion. It is cognitive aspect of gregarious drive. One way of classifying suggestion will be as incidental (unconditional) or intentional (deliberate). An example of unconditional suggestion will be: we suggest fear in children by telling them stories of ghosts, demons and evil spirits. In intentional suggestion we deliberately try to put certain ideas and thoughts in the minds of others for the sake of realising certain purposes.

Another way of classifying suggestion will be as follows:

Prestige Suggestion:

Persons superior to us in knowledge, experience, scholarship, status, power, age excite our suggestion and we readily accept what they say. This is prestige suggestion.

Mass Suggestion:

It is the suggestion made by a group of people as a whole. When the same thing is told by every one with whom we come in contact, we are likely to accept what is said.

Prestige suggestion and mass suggestion are being largely used in advertisements through newspapers, magazines, journals, TV and through mass media in general.

Teachers of high calibre (through prestige suggestion) and all teachers collectively (through mass suggestion) incidentally and intentionally can suggest socially useful thoughts, ideas and opinions to the student population and the student community, as a result, is likely to develop a sense of social commitment.

AutoSuggestion:

This is suggesting to oneself. Unwholesome autosuggestions are to be avoided and replaced by wholesome autosuggestions. Positive autosuggestions are likely to develop self confidence and positive self concept in people. Negative autosuggestions, on the other hand, are likely to develop all negative traits in people. Teachers, indirectly, may be instrumental to positive autosuggestions auto of the student population.

ContraSuggestion:

This is doing or thinking the exact opposite of what is suggested. A persistent attitude of this kind is known as negativism. Contrasuggestion may be an unconscious revolt against a dominating, unsympathetic adult code or may be an imitating activity of somebody (at home) who gets things done in his favour by openly revolting against elders in the family (a negative role model). What is required is a diagnostic study of such cases followed by suitable remediation.

Questions:

1. What is meant by Mimesis? (in about 50 words).
2. What is meant by imitation? Bring out its educational significance (in about 150 words)
3. What is meant by sympathy? Bring out its educational significance (in about 150 words)
4. What is meant by suggestion? Identify the different types of suggestion. Outline the educational significance of suggestion (in about 300 words).
5. Discuss how 'Mimesis' covers all the three domains of behaviour.

SECTION IV

ATYPICAL A BEHAVIOUR

- Backwardness
- Clumsiness
- Delinquency
- Giftedness
- Special talents
- Creativity

Our formal educational system is such that a typical teacher appeals to the maximum numbers of students in the class And these students are the 'typical' ones. In this attempt other students – 'the atypical ones' are ignored (not intentionally but incidentally). In this section such atypical ones are broadly classified and their educational and social needs identified and discussed.

CHAPTER 13
BACKWARDNESS

Content outline: Backwardness – Characteristics of the backward – Causes of backwardness – Diagnosis and remediation.

Backwardness refers to academic backwardness; low achievement or slow learning may also be used to indicate academic backwardness. The term 'underachievement' is being avoided for the following reason: According to one school of thought the underachiever is one who performs below his potential. If we apply this definition almost all of us will be underachievers. The problem of dealing with the academically backward children has bothered all thinkers, educationists and psychologists. They have been studying the causation and treatment of academic backwardness.

The backward student does not show satisfactory progress in studies when compared with most of the students of his class or of his age. He is weak in academic activities and the result of his tests and examinations are poor. For every subject of study or any other academically related activity for a pass there is a minimum score required and the backward child fails to reach this mark. Backwardness may be general or specific. General backwardness refers to backwardness in all academic studies whereas specific backwardness refers to backwardness in specific subjects or activities.

Causes for Backwardness:

Backwardness is only a symptom. We must identify the causes and treat them. (In medical science, symptomatic treatment will give only temporary relief, not a permanent remedy). In most cases academic backwardness may be due to

-        low innate general mental ability (low intelligence)
-        poor home conditions
-        physical weakness or ill health

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-       poor school conditions
-       ineffective instruction

Two main factors causing backwardness are heredity (nature) and environment (nurture). Heredity is prenatal. This may be physical defect or mental defect. Some are born mentally inferior. They lack normal intelligence – a factor which facilitates academic performance. Some children may have inborn physical handicaps. Environment is postnatal. Reasons may be ill health and poverty. Poverty does not cause backwardness directly. It has indirect influences like impairing health and limiting educational opportunities. Educational status of home has greater influence on academic attainments of children than its economic status.

Diagnosis and Remediation:

A thorough diagnosis of backwardness is to be performed through diagnostic tests to identify learning difficulties of the backward children. This must be followed by proper remedial instruction. Teachers in charge of remedial treatment should understand the difficulties of the backward. They must approach such students with sympathy and empathy. All abstract concepts are to be concretized through instructional aids. Academic content is to be presented in moderate assimilable doses. Language employed by teachers must be simple and within the reach of the students. Teachers must pace their presentation in accordance with the learning capacity of the backward children. They must provide periodic pauses in their presentation to confirm whether the students have followed theirs. Students may be permitted to raise questions to clarify their doubts. Activity methods, play way methods, project oriented methods may also be judiciously employed.

Teachers must have this in mind: the backward child, in all probability, is a slow learner and not a non-learner. Dull children

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are relatively less handicapped in practical activities than in theoretical ones. They find it easier to acquire motor skills than to acquire ideas, to work with concrete materials and movements than to work with abstract signs and symbols. They need more practice, repetition, drill and review. Backward children, generally speaking, do not feel at home with teachers. They would rather prefer to clarify their doubts from their classmates who are superior in academic attainments and who are willing to help them. Peer tutoring (teaching by peers) may also be employed. Educational technology, today, has offered a new vista-programmed instruction. Text book written in programmed format may be given to the backward children for mastering relevant academic concepts and skills. CAI (Computer Assisted Instruction) structured in Programmed format is the latest addition in this list. Resourceful and dedicated teachers will leave no stone unturned in helping the backward child attain a normal academic performance.

Questions:

1. Define backwardness (in about 75 words).
2. What are the characteristics of the backward? (in about 75 words).
3. Identify the causes of backwardness. (in about 75 words)
4. How will you, as a teacher, diagnose backwardness and implement a remedial programme of action? (in about 300 words).

Ps.

Several of the academically backward students either become 'late bloomers' When they reach higher in the academic ladder or shine later in life when they choose a job. Most of the academically backward students have only specific backwardness and not general backwardness. Both these students and their teacher must remember that the world is meant for not only for the academically strong but for the academically weak as well.

CHAPER 14
CLUMSINESS

Content outline: Clumsiness – Natural clumsiness, Emotional clumsiness – Left-handedness – Incidental clumsiness.

The term 'clumsy child' includes a wide variety of difficult children - those who are clumsy in physical exercises, those who find it difficult to walk across a room in an easy, controlled manner, those whose handwriting is bad, those whose note books and books are marred by blots and marks, those who are prone to accidents and breakages, those who find it difficult to speak out clearly, those who stammer and stutter and those who are left handed. Our knowledge of the cause of clumsiness is not yet extensive or precise. In a few cases clumsiness runs in families.

Natural Clumsiness:

So far as children are concerned clumsiness is a natural phase out of which they will grow if they have the right kind of experience and guidance. Another form of clumsiness that will disappear naturally after a time is the one often exhibited by the adolescent. It is due to temporary loss of bodily control and the chief casue is probably the rapid bodily growth at this period. Natural clumsiness is a phase of growth and development and it can be overcome with proper guidance-physical exercises for proper posture and gait.

Emotional Clumsiness:

Extremely clumsy children in whom clumsiness is persistent and widespread are usually suffering from some emotional disturbances. They are the so-called nervous children. They are not clumsy in one or two ways but on almost all occasions. In addition some of them show other symptoms of emotional disturbances such as thumbsucking, nailbiting, extreme shyness, inability to speak out, stammering and stuttering, lack of concentration, perpetual tiredness, and left-handedness.

Punishment based treatment and methods that rely on the appeal to fear are obviously not only ineffective but unethical. Children must achieve a measure of success and need encouragement. They need a friendly, cordial atmosphere, free from criticism. Though their clumsiness may be extremely irritating to us, it may also be extremely painful to them and moreover it is something which they cannot overcome by sheer will power.

Clumsiness may be a symptom of some forgotten trouble-trauma (emotional injury), fear of parents, elders or bullies, jealousy of a sibling at home or some unhappy experience in early childhood. If home climate, classroom climate and the campus climate are conducive most of the clumsy behaviours are likely to disappear. If they do not, such children need psychiatric treatment. Most cases of stammering and stuttering (the root cause being timidity and diffidence) are cleared with timely psychiatric treatment.

Left-Handedness:

We live in a world meant for right-handed people. Some left-handedness is probably hereditary; it runs in families and it appears to be natural. The second type of left-handedness is a symptom of emotional disturbance. Owing to unwise (perhaps unintentional) repressive treatment the child might have become a rebel and his left-handedness (in the right-handed world) is the manifestation of his self-assertion and sense of independence though he himself is not aware of this. If efforts are made to change his handedness (from left to right) he resists them. Ifpressure is applied the emotional disturbance may be aggravated and it is likely he may develop other forms of clumsiness unconsciously to assert his rebellious spirit. It is difficult to discover the origins of left-handedness. However we must encourage and train children to use their right hands. If it is done tactfully and without pressure, habitual left-handedness may be overcome without harm being done to the individual. If, on the

other hand, any signs or increased emotional disturbance are noticed, then it is advised to discontinue treatment.

Incidental Clumsiness:

All clumsiness is not necessarily emotional clumsiness. There are times when clumsiness is incidental. Here is a list of questions for the teacher. If his answer is 'yes' then it is a case of incidental (temporary wave of) clumsiness.

- Is the clumsiness exhibited by a large number of students in the class? (reflection of teacher's clumsiness)
- Are students suffering from boredom or fatigue?
- Are they excited?
- Is the work unsuitable for children of that age?
- Are the equipments defective or out of order?
- Are working conditions non-conducive?
- Is relationship between the instructor / teacher and the students strained?

A Final Word:

Clumsy behaviour need not necessarily be emotional or incidental. It may be due to physical deformity or lack of neuro-muscular motor co-ordination inherited prenatally or acquired in accidents. It is true some geniuses and high achievers occasionally manifest clumsy behaviour but the converse is not true ; clumsiness does not indicate greatness.

Questions:

1. What is meant by clumsiness? (in about 75 words)
2. Distinguish between natural clumsiness and emotional clumsiness (in about 300 words)
3. How can left-handedness be remedied? (in about 75 words)
4. What do you mean by incidental clumsiness? Identify factors which cause incidental clumsiness (in about 75 words).
5. It is not advisable to overpsychologize clumsy behaviour'. Discuss (in about 150 words)

CHAPTER 15
DELINQUENCY

Content outline: Delinquency – Causes – Forms of delinquent behaviour – Counselling for the delinquent.

Delinquency is a kind of maladjustment of a serious type. A delinquent child is a young offender against law but generally his offence is not so serious as to be considered a crime. Bullying, boasting, spoiling the articles of the school, smoking, stealing, lying, truancy are some of the common delinquent phenomena found in schools. Delinquency is caused by innate emotional instability or insecurity. Temperamentally defective individuals are marked by emotional maladjustment.

Environmental or Sociological Causes:
- Poverty (indirect cause)
- Lack of conducive home climate (broken homes / defective discipline / alienation)
- Bad company (defective peer group)
- Uncongenial school conditions (lack of discipline, indifferent supervision, inefficient and ineffective staff)
- Undesirable place of residence (lack of social norms; lack of culture; bullies and rowdies dictating terms; victory of aggressive behaviour).

All the causes mentioned above lead to emotional conflicts and repression of wishes. Repression of unfulfilled wishes is the root cause of delinquent behaviour. Some common forms of delinquent behaviour are:

- Bullying and teasing: Children suffering from neglect and deprivation of even basic needs are likely to become bullies and tease other children who are superior to them in academic

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achievement and who happen to be in the good books of teachers.

- Smoking: Children imitate superiors. It is a mark of showing oneself off.

- Stealing: It meets their basic needs and it gives them a psychic pleasure when others are deprived of their belongings.

- Lying: It is used to avoid punishment or at times as an attention-seeking device. It may be instigated by any of the following factors; fear, greed, anger, self display, mistaken loyalty and affection.

- Problems faced by the delinquent children are generally more difficult and complex than those of other atypical children because of hostility and resentment they face in society. Because we have no sympathy for delinquent children we are likely to aggravate the situation through drastic treatment - usually severe punishment. Delinquent behaviour outside the school campus is usually accompanied by misbehaviours in the campus – truancy, and a general distaste for the school. Symptoms of potential delinquency may be identified early in the life of the child right in the primary school itself and future aggravated delinquent behaviour may be prevented if treated early.

Psychologists advocate counselling as the best treatment for delinquent behaviour. The process of counselling must start as early as possible. The counsellor must have sympathy and empathy for delinquent children. He must be willing to listen to their problems and offer suitable remedial suggestions. He must be sensitive to social, political and communal problems, which are likely to affect the student population. He must have a series of individual sittings (sittings with individual students) and later collective sittings (sittings with a group of delinquents with similar

problems). Conselling is a non-sermonizing, non-moralising, non-advice-giving process. He must convince all his counsellees that delinquent behaviour is an offensive and socially disapproved behaviour which will affect their lives sooner or later. He must socialise them and cultivate in them socially approved behaviours gradually. Delinquent children must be convinced that delinquent behaviours are not the ways of solving their problems. Delinquent behaviours will alienate them from society and they will become worthless, useless people avoided by society. It must be brought to their notice that if delinquent behaviour is the only method of solving personal problems, then almost all of us will become delinquents.

"Poets have extolled the innocence of infancy; only the psychologist and the teacher know too well that moral perfection is not an innate gift but a hard and difficult acquirement; the perfect child is yet to be born and bred".

- Cyril Burt.

Questions:

1. What is meant by delinquency? (in about 75 words)
2. Identify causes of delinquent behaviour? (in about 75 words)
3. Identify behavioural manifestations of delinquency (in about 150 words)
4. Outline a counselling programme of action for the delinquent (in about 300 words)

P.s.

The so- called problem student is a student with a problem. Since he is not able to solve his problem (s), he becomes a Problem Several of his problems may be unconscious. The individual himself may not be aware of his 'unconscious' problems and may not understand why he is behaving in a problematic manner disturbing himself and others . In severe cases, psychiatric treatment may be required.

CHAPTER 16
GIFTEDNESS

Content outline: Giftedness – Problems of the gifted – Adjustment of the gifted – Education of the gifted.

The gifted child has a high degree of general mental ability (intelligence). The gifted children, generally, are superior to the average child in physical, emotional, intellectual and social development. The gifted child is sensitive to environment and display intelligent behaviour.

Problems of the Gifted

Intellectually gifted children have more educational problems than is commonly supposed. Adults expect more of these children and this leads sometimes to difficulties. Most of the gifted cannot stand defeat without being crushed. The obligation to be superior always is as pressurising as the label of inferiority. However an even more crucial problem is the failure of the conventional school experience to stimulate and challenge them – a condition which often leads to boredom, distaste, and disruptive behaviour. Our conventional educational institutions are tailored to meet the needs of the mediocre (in framing the syllabus, in classroom teaching, question paper setting and valuation of answerscripts). Many gifted students naturally diminish their talents and creative ability by putting forth no more effort than is necessary to conform to the average performance of the group. As a result many students fail to develop their real potentialities, drop out of school after completing school education and thus are lost as potential leaders or competent professionals.

Adjustment of the Gifted

It is said that owing to their superior mental ability they are unable to adjust socially. This is a false notion. Studies have shown that the gifted can adjust far better socially than the average though the gifted child has

the problems of adjustment like any other child. He possesses the ability to solve problems. The gifted child is normally happier than the average child. The superior general ability of the gifted help him in solving problems of adjustment.

Education of the Gifted

Educationists have sought to meet the needs of the gifted in three ways.

- Acceleration
- Segregation (special class)
- Enrichment

Acceleration refers to promoting the child to a higher class in the middle of the academic year. But it has the disadvantage of putting gifted children with children who are physically and socially more mature. Further it does not solve the basic problem that is lack of freedom for the gifted to think and act for himself.

Special classes are feasible when there are sufficient number of the gifted to form a group

Enrichment seems to be the ideal solution but it requires more time and energy and teachers may not be willing to prepare such a curriculum. Giving special attention to a few children in the class may create problems.

A practical solution will be then of activity type of class (periodically organized) where all students have opportunities to work at their own speed in a more or less independent manner (Directed study with differentiated assignments).

Schools must provide challenging, interesting, stimulating and enriching educational opportunities. The gifted child needs a gifted teacher who can interest him, inform him, instruct him, inspire him and then ignite him to a higher intellectual locomotion.

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Ingersoll: "school is a place where pebbles are polished but diamonds are dimmed". The gifted child is a social asset. Will our formal educational system rise to the occasion and deliver goods?

Questions:

1. What is meant by giftedness? (in about 75 words)
2. Identify the educational problems of the gifted. (in about 150 words)
3. Identify the adjustment problems of the gifted (in about 150 words)
4. How will you, as a teacher, meet the needs of the gifted? (in about 300 words)

Ps.

Destiny of a Nation is being shaped in educational institutions. National Development depends upon the contribution of the gifted Citizens who must be motivated to give their best for the Nation by their teachers and other social leaders. In addition opportunities must to given to them for their contribution to society. The gifted belong to society their talents are to be fully utilized by society.

CHAPTER 17
SPECIAL TALENTS

Content outline: Special talents – Natural and innate basics required – Catering to the needs of the talented.

The talented child is one with a special talent in one or more of the following: music, dance, painting and creative writing, crafts and the like. These talents may not be required for academic achievement. That is why they are called special talents. The talented child has a natural flair for the talent of his choice. When other children struggle to gain even the minimum level of achievement in these talents, these children (with special talents) attain higher levels in their talents effortlessly and with ease. They have interest and aptitude for these talents. The following table furnishes information on talents and corresponding basics.

Talent	Natural, innate basics required
Music (vocal)	Singing voice, modulation, auditory images, ability to learn by imitation, auditory memory, aesthetic sense, creativity
Dance	Aesthetic sense, ability to learn by observation/imitation, visual images/ memory, good aesthetic postures, voice, gait, neuro-muscular motor coordination and physical movements with ease, physical fitness, aesthetic and creative sense, sense of music.
Music (Instrumental)	Finger dexterity, neuro-muscular – motor coordination, sense of music, auditory images / memory, aesthetic and creative sense.
Painting	Finger dexterity, neuro-muscular, motor coordination, aesthetic sense, colour sense, visual imaging/memory, power of observation, creative sense
Creative writing	Creative sense, aesthetic sense, visual and auditory imagery, observation, imagination, rich, powerful, colourful vocabulary.
Crafts	Creative sense, aesthetic sense, finger dexterity, neuro- musculer, motor co-ordination, observation, space factor, handling tools with ease.

Parents at home and teachers in school can easily identify such children (with special talents). Adequate opportunities are to be provided by parents and schools for these children to develop and enrich their talents. A vast majority of such children may be mediocre in academic performance. Such children after their school final may be encouraged to get admitted in schools meant for training their respective talents. Some of such children

(specially talented) may also be high achievers academically. They may be encouraged to pursue higher academic studies of their choice (studies for which they have interest and aptitude) and their respective special talents as a part time activity.

Questions:

1. Identify the major special talents exhibited by school children (in about 75 words).
2. Identify the innate basics required for special talents (in about 150 words).
3. How can teachers and parents cater to the needs of children with special talents (in about 150 words)

Ps. To be born with a rich talent in a society which offers no scope for enrichment is a cosmic catastrophe.

CHAPTER 18
CREATIVITY

Content outline: Creativity – identification and fostering – Stages of manifestation of creativity – Educational implications.

There was a time when people thought creativity was related to intelligence (especially abstract intelligence). Studies have shown that there is no substantial relationship between intelligence (abstract intelligence) and creativity. Intelligence tests do not measure creativity. It was Guilford who identified two types of thinking – convergent thinking and divergent thinking. Convergent thinking is a process where an individual is in search of a specific solution to a problem. On the other hand in divergent thinking an individual finds several solutions to a problem. Divergent thinking based on imagination leads to creativity.

According to Torrance, creativity is characterized by spontaneity, flexibility, adaptability, originality and fluency. He advocated some measures to be employed by the teacher to foster creativity in children:

- Treat their questions with respect
- Treat unusual imaginative ideas with respect
- Show students that their ideas have value.
- Give opportunities for practice
- Encourage self initiated learning

Psychologists suggested brainstorming and free wheeling a method of fostering creativity. They emphasized openness to experiences as a condition for creativity to bring out something new, novel and strikingly original.

Stages of Creativity

There are four stages of creativity – preparation, incubation, illumination and verification.

Preparation

The problem is defined and explained. It is an orientation with the problem and involves purposeful study, discussion with others and acquisition of data. Relevant data are collected. The plan of action is formulated. Creative work is, largely the result of diligence – systematic hard work. Perspiration leads to inspiration. No creative person of great eminence reports that he has reached the peak effortlessly.

Incubation

This is characterized by absence of overt behaviour. No new knowledge or experience is added to the existing stock. There is no external stimulation. It is a state of rest or equilibrium. The mind is at ease – in a relaxed position. No hurry or compulsion. Hurry and compulsion are fatal to creativity resulting in abortion of creative ability."

Illumination

Incubation leads to illumination. There is a sudden appearance of the solution as a brainwave – flash – a lightning as in learning by insight

Verification

The individual concerned determines whether the solution that occurred to him is the right one or whether it requires any modification or improvement. In the light of verification of results, further attempts are initiated till a final solution is arrived at.

Here is an illustration. There is a brain storming session. Members are requested to suggest a catchy title to a book. The book is a biography (not autobiography) of Dr.A.P.J. Abdul Kalam (Former President) written by one of his close friends. This is the

preparation stage. You go through the book. You think of titles of similar books. You also think of catchy phrases associated with certain Presidents. Presidents of America – Lincoln (from the Log cabin to the Whitehouse), Carter (From Peanut to Presidency). This stage is followed by incubation. You forget about it and preoccupy yourself in other tasks or you take rest or sleep. All of a sudden a catchy title occurs to you – From Rameswaram to Rashtrapathi Bhavan. At the verification stage it is thrown open to others. They welcome this title and it is finalized as the most appropriate (catchy) title for the book.

Educational Implications

An open classroom climate is necessary for fostering creativity. Some creative children become dropouts or push outs since the school curriculum and method of teaching do not appeal to them. A typical student answers the teacher's questions. But a creative student questions the teacher's answers (not insubordination but a spontaneous reaction). Hence several creative students are misunderstood to be problem students and teachers avoid them. To foster creativity in the classroom, children should be encouraged to express their thoughts and feelings spontaneously. There is no one single method of doing things; there are several approaches. Students may be encouraged to think of different approaches to solve a problem, to contain a difficulty. Divergent thinking is to be encouraged on appropriate occasions. Classroom climate must be conducive for self-expression and self-direction.

There are of course individual differences. There is sufficient scope for creativity even in our academic subjects in

spite of several drawbacks and rigidity. Children with special talents – talents in music, dance, writing, painting, craftwork can be identified and creativity may be fostered in them. Development of these talents does not follow any rigid pattern as in the mastery of academic subjects and hence there is more scope for fostering creativity in such children.

Children must be exposed to rich, creative experiences. Books, journals, magazines must be available to them. Creative curricular activities and extra curricular activities are to be organised. Creative ability is to be recognised and rewarded. A climate ensuring safety, security, love, belongingness, recognition is to be maintained in educational institutions to foster creativity.

Questions:
1. What is meant by creativity? (in about 75 words)
2. How will you, as a teacher, foster creativity in children? (in about 75 words).
3. Identify the sequential phases of manifestation of creativity. (in about 300 words).
4. Outline the educational significance of creativity (in about 150 words).

<u>Ps</u>.

Aptitude for Research in Science and Technology coupled with 'Creativity' is the need of a promising scientist of the Day. Hence Curriculum is to be flexible and individualized to strike a call to the capacity and talent of every child.

'Creativity' is in us – in each of us – in some degree in all – in the highest degree in a very few us. This very few of us ought to be identified early and their creativity fostered in the interest of society.

SECTION V
LEARNING

- -Theories of learning
- -Transfer of learning

CHAPTER 19
THEORIES OF LEARNING

Content outline: Learning – Thorndike's theory and laws – Principles of learning – Pavlov's classical conditioning – Second order conditioning – Stimulus generalisation – Educational implication of conditioning – Skinner's operant conditioning – Gestalt theory of learning – Trial and error Vs. Insight – learning by imitation – Instruction in learning – Animal learning and Human learning – Maturation and learning – knowledge of results – Primary, Associate and concomitant learning - Learning curves – Plateaus – How to overcome Plateaus.

Learning:

Learning is a universal experience. In all learning there is a purpose. We learn so that a result may occur. In its simplest form, learning is a matter of making responses to stimulation or modifying previous response in order to bring about an improvement. The individual learns new ways of doing things, new ways of thinking and new ways of adjusting to the environment. Learning involves the acquisition of new behaviours and sometimes modification of old behaviours. Learning is relatively a permanent change of behaviour resulting from experience.

Thorndike's bond Theory of Learning:

Some initial push (a need, a wish, an ambition or a goal) is necessary if one is to learn. In the typical experiment of Thorndike, a hungry cat is put inside a puzzle box and the door is closed. Food is placed outside. In order to open the door, the cat has to operate a lever mechanism correctly. The cat makes certain random movements like scratching, clawing and biting and at last it hits upon the correct method of opening the door. The time taken for such random movements gradually decreases and then comes a time when the cat learns how to open the door in no time. In this

experiment, hunger is the motive or drive which starts the activity of the cat and food outside the cage is the incentive. The initial random movements constitute the trial and error. The length of trial and error period depends upon a number of factors such as the difficulty of the task, the maturity of the learner, understanding and experience which he brings to the task. Unless behaviour is rigidly planned the learner will indulge in a number of responses until he hits upon the right response. A major concern of education is to reduce the trial and error period and to help the learner organize his responses more quickly and effectively. Reinforcement is any device which increases the probability of a given response. Reinforcement occurs when a response is satisfied, when it provides food for the cat or a prize for the child, a word of appreciation for the school boy and the like. Reinforcement also operates when the cat makes a response which relieves it of an electric shock or when a child learns a lesson to avoid punishment or social disapproval.

The basis of learning, according to Thorndike, is association between sense impressions and impulses to action. Such an association came to be known as a bond or connection.

Because it is these bonds or connections that become strengthened or weakened in the making or breaking of habits, Thorndike's system has been called a bond psychology or simply connectionism. As such it is the original S-R Psychology of learning.

Based on a series of experiments on learning, Thorndike arrived at three laws of learning: Readiness, Exercise and Effect

Law of Readiness:

There can be no effective learning unless there is a pre-disposition to learn. A synonym for readiness is mental set. A student has mental set to do his lessons when he is disposed to work at them. A teacher observes this principle when he motivates his students for the lesson to be taught.

Law of Exercise (Use and Disuse)

A correct response once learned, is to be repeated sufficient times (recurring experiences) so that it can be mastered. According to law of recency an act recently performed being fresh in the experience of the organism is most likely to be repeated. Law of frequency states that for effective learning the activity learnt should be frequently repeated. We observe this principle when we re-read our lessons a number of times in order to learn them. Drill and Review are also based on this principle. Learning tends to be in proportion to the amount of repetition or use and forgetting in proportion to the amount of disuse. Of course other factors are also involved such as interest and concentration.

Law of Effect

Learning accompanied by a pleasant or satisfying feeling is strengthened and learning associated with an unpleasant feeling is weakened. This is based on feelings. Thus success accelerates learning and failure retards it. The entire system of reward and punishment is based on this principle.

The general principle of learing may be summarised as follows:

- Initial motivation (or readiness)
- Multiple response or trial and error
- Reinforcement (effect)
- Repetition (exercise)

Readiness -----→ Response -------→ Effect -------→ Exercise
(Motivation)   (Trial and   (Reinfor   (Repetition)
                  Error)   cement)

The first explains why the learner tries to learn, the second how he gets the right response, the third why he retains and repeats the right response and the fourth how he acquires habits and skills.

Pavlov's Classical Conditioning (Substitution or Associated Learning)

Pavlov was the first to perform experiments to study the connection between stimulus and response. He was working on digestic system of dogs. Sight of food, being the stimulus, will naturally elicit salivation (natural reflex) as a response from a dog. In his experiment Pavlov sounded a bell before presenting food. This treatment continued for quite sometime. What happened was mere sound of the bell unaccompanied by food was able to elicit the response of salivation. Food is the natural stimulus and salivation is the natural response.Sound of the bell is an artificial stimulus or conditioned stimulus. Salivation for the sound of the bell is an artificial response or a conditioned response.

The experiment is diagrammatically outlined below:

S1	Presentation of Food (Natural Stimulus)	Salivation (Natural response)	R1
S1 + S2	Presentation of Food +sound of a bell	Salivation	R1
S2	Sound of a bell (conditioned stimulus)	Salvation (Conditioned response)	R1

Conditioning means establishment of relationship between a stimulus and a response which have no natural connection. The natural stimulus is called unconditioned stimulus (US) – Primary stimulus. The response to the natural stimulus is the unconditioned response (UR). The experimental stimulus is called the conditioned stimulus (CS) – the secondary stimulus (SS). The response after it has been conditioned is called conditioned response (CR).

Once the conditioned response has been established, the next logical step is to present the substitute stimulus alone (sound of the bell without presentation of food) again and again. When Pavlov did this the dog at first salivated at the sound of the bell alone; but soon the flow of saliva started decreasing and at last stopped. This is a demonstration of extinction or a dying out of an unreinforced response. That the conditioned reflex was not completely lost through extinction was shown by reestablishment when the bell was once again associated with the offering of food. A loud noise such as thunder often produces a spontaneous fear reaction in a young child. Since the thunder is often preceded by lightning many children develop a fear of lightning (as a conditioned response).

Second order conditioning

What is called secondary conditioning occurs when a second and originally neutral stimulus is associated with and is able to substitute the now effective (conditioned) stimulus. In the second order conditioning bell was replaced by light.

Stimulus generalization

It is the tendency to react to stimuli that are different from but somewhat similar to the stimulus used for conditioning – inability to discriminate between stimuli which almost look a like mistaken identity.

Educational Implications of conditioning:

Many instances of human learning are conditioned responses. The learning of a language and motor activities can often be so described. The list may also include the acquisition of fear, likes, dislikes and attitudes. Children learn to associate words with specific objects through conditioning. A parent points to an animal and says 'cat'. The child says something which sounds like 'cat' and is rewarded. When the child's vocal apparatus is sufficiently developed he actually says the word cat at the sight of

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the animal. The teacher as an important factor conditions the attitude of his students towards the subjects and situations that arise in the classroom. If the teacher has an impressive personality he can condition his students to be interested in the studies. If the students do not like the teacher, they are likely to be conditioned to take the same attitude towards most situations in the classroom.

Teacher cannot rely too much on conditioning. If we depend too heavily on S-R approach to learning, we are likely to believe that learning will be automatic once we hit the proper combination of elements. It is a mechanical approach to learning.

Skinner's Operant (Instrumental) Conditioning

Stimuli may be internal or external. When stimuli are external, responses are elicited. Elicited responses are called respondents. When stimuli are internal, responses are emitted. Emitted responses are called operant's. Most human behaviour is operant in nature. The behaviour of eating a meal, driving a car, writing a letter, reading a book, giving a talk shows little of respondent nature.

B.F. Skinner used an apparatus (skinner's box) to study operant conditioning. The rat gets a pellet of food on the pressing the lever. It is not merely the sight of the lever (elicited / respondent) but pressing of the

lever (emitted / operant) that is rewarded. The operant concerned should appear first; then only it can be strengthened. Skinner did extensive research with pigeons. Since his focus was on conditioning operant behaviour his theory was called operant (or instrumental) conditioning. This theory formed the basis of programmed instruction (learning principles of small steps, immediate reinforcement, active responding and self pacing).

Gestalt Theory of Learning:

Kohler, Koffka and Wertheimer were German psychologists who worked on perception. Gestalt means whole or pattern. According to this theory, learning is determined by the

pattern of stimuli. The interrelationships of the elements, how they shape up as a whole is what causes the nature of the perceptual field; the changes in pattern result in new learning. There can be a change in the field or pattern of stimuli that results in sensing the idea or acquiring the solution as a flash. This is called learning by insight. A learner may, for example, be working on a problem or a puzzle and make no progress at all until the solution occurs all at once.

Kohler conducted a series of experiments with chimpanzees, keeping them hungry and placing them inside the cage and placing bananas outside the cage. In some experiments bananas were placed outside the cage at a distance and chimpanzees could not reach them by stretching their hands. A stick (fitted with a hook) was placed near the cage. Initially

chimpanzees did not make any attempt to use the stick to get bananas. All of sudden this idea occurred to the chimpanzees like a brainwave, flash.

In another experiment the bananas were placed at a longer distance. Two sticks (fitted with hooks) one long and the other short were placed near the cage. Chimpanzees tried to reach the bananas with a short stick at first and with a long stick next with no avail. The sticks could be fitted together (telescopic pattern). And this idea occurred to the chimpanzees all of a sudden, like a flash, lightning.

Kohler eraphasizes the suddenness with which the right solution appeared. The animal all of sudden has a brainwave – an insight. Learning by insight is also called "Aha" experience ('Eureka' experience). The 'whole' of the situation rather than its separate parts should be presented to the learner since it is the whole that determines the perception of the learner. Teaching should be meaningful, organised and integrated.

Trial and Error Vs. Insight

Is trial and error really opposed to insight? Are these two theories contradictory? (or complementary) In the so-called insightful learning, the learner does not perform the correct response initially, restless for sometimes and then after sometime hits upon the correct response all of a sudden, like a flash, like a lightning. During the time interval between the initial incorrect response and the correct response by insight the learner seems to be restless doing nothing. Is he really doing nothing? Some psychologists observe that the learner is trying to solve the problem by trial and error mentally; learning by insight is after all, the last stage of (mental) trial and error. Insight is similar to

inspiration and trial and error is similar to perspiration. There can be no inspiration without perspiration. When inspiration occurs it hides the perspiration behind it; when insight occurs it hides trial and error behind it. According to these psychologists these two are not necessarily contradictory but complementary.

A general observation on 'Theo-ries'

No theory is perfect. A theory of a particular period is able to answer questions raised on the area about which the theory is expounded. When it fails to answer additional questions on the area its gaps are exposed. Then emerges another theory. A succeeding theory does not necessarily contradict a preceding theory. It attempts to fill in the gaps of the former. A succeeding theory complements a preceding theory.

Learning By Imitation

Experiments are conducted on animals and human beings to find the extent to which learning could be done by observing and imitating. Most of the experiments with animals gave negative results. Only in the case of higher apes indications of learning by imitation were noticed. On the other hand experiments with human beings are encouraging and most of the results are in favour of learning by imitation.

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Instruction in Learning

Experiments emphasize the significance of instruction in learning. Clear and precise instructions result in effective learning. Precise and clear instructions are necessary even when the learner is highly motivated. Materials are not learnt unless there is a felt need. Active participation is equally important.

Animal Learning and Human Learning

Man is more readily motivated towards a specific taskand responds quickly to instruction and is more likely to perceive relevant association, to form genealizations and discriminations than animals.

Man has a better control over his emotions, is less likely to become confused and devotes most of his energy and time to the learning of a problem and to the selection of reinforcing response.

Man has a very great advantage over the animals. He is able to work with symbols-language, numbers, spatial diagrams and the like. He is better-equipped than animals. He is able to select a course of attack after 'thinking and reasoning' without actually performing 'trial and error' activities.

Maturation and Learning

The physiological system is the basic equipment with which the organism learns. Most of our learning activities depend on the of maturity reached by the central nervous system and the muscular system.

Arnold Gesell of Yale University conducted a number of experiments with children. In one experiment his subjects were two infant girls-twins. One of two was trained at 46 weeks of age to climb stairs; seven weeks later the other child was given the same training. What the first child learnt in 7 weeks was learnt by the second child in 2 weeks. Such experiments draw our attention to the following conclusions:

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- The process of maturation helps children learn quicker.

Maturation only unfolds potentialities; only by training and exercise the potentialities can be made functional.

The degree of maturation necessary for a particular training to be effective is called learning readiness. The learning readinessof the child is to be studied before it is taught. It is also true that children differ in maturation.

Knowledge of Results (KR)

Knowing how one is doing offers strong incentive to the learner to put forth additional efforts. It is important that the learning task must be adjusted to the learner's level of maturity, his abilities and interests. The problem should be hard enough to challenge him but not so difficult as to confound him. Too easy a task leads to indifference or even distaste for the job. Too difficult a task may lead to discouragement or even despair. Neither situation is conducive to effective learning.

Primary, Associate and Concomitant Learning

Primary learning consists of mastering of the immediate objectives (for example: 'History of Japan'); Associate learning consists of related objectives (A brief outline of 'Geography of Japan' to understand 'History of Japan' better); concomitant learning consists of the feelings, the motivation and points of view that are the outcome, of primary and associate learning (an exposure to 'History of Japan' is likely to develop a positive and favourable attitude towards Japanese because of their general characteristics – diligence, patriotism and work culture etc.) It is often advocated by educational psychologists that moral instruction be given in concomitant fashion. Moral instruction need not be isolated from other academic disciplines and taught as a separate subject. Moral instruction can be taught as concomitant of all academic disciplines (languages, sciences and humanities) Anecdotes, biographical sketches in the lives of scientists, scholars, experts and academics may be presented to the class (before teaching their theories) and such presentations are likely to motivate and inspire the learners to cultivate personal characteristics such as work ethics,

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intellectual honesty, self- confidence perseverance and other basic human values.

Questions:

1. What is meant by learning? (in about 75 words).
2. Attempt a critical estimate of Throndike's theory and laws of learning (in about 300 words).
3. Briefly outline Pavlov's classical conditioning (in about 300 words).
4. What is meant by second order conditioning? (in about 75 words).
5. What is stimulus generalization? (in about 75 words)
6. Briefly outline the educational implications of conditioning (in about 150 words).
7. Briefly outline Skinner's operant conditioning. In what way is it different from classical conditioning? What are its educational implications? (in about 300 words).
8. Attempt a critical estimate of Gestalt theory of learning (in around 300 words).
9. In what way is 'Trial and error' different from 'Insight' (in around 150 words).
10. Write short notes on the following: (in about 75 words each)
    (a) Learning by imitation
    (b) Instruction in learning
    (c) Animal learning vs. human learning
    (d) Knowledge of results
11. What is the role of maturation in learning?
12. What is meant by learning readiness? (in about 150 words).
13. Briefly explain and illustrate primary, associate and concomitant learning. (in about 150 words).

14 How will you, as a teacher, create a conducive learning elimate in your class? (in about 300 words).

Ps:

Learning is a lifelong process. It may be formal non-formal or informal. No one can observe. ' I have stopped learning '. We learn not only consciously (intentionally) but unconsciously (incidentally) as well. Good learning implies not only learning useful knowledge skills and good habits but unlearning useless knowledge and breaking of bad habits as well.

CHAPTER 20
TRANSFER OF LEARNING

Content outline: Theory of formal discipline – Transfer – intra domain and inter domain transfer – Types of transfer – Theories of Transfer – Throndike's – Judd's – Educational implications of transfer.

Transfer of learning (it was once called transfer of training) was based on theory of formal discipline. The theory of formal discipline (mental discipline) refers to the training of mental powers. A subject has disciplinary value if it trains one in observing accurately, thinking logically, developing powers of attention, acquiring general mental power (geometry to train the mind to attack problems logically. Latin to develop mental stamina; Grammar to improve reasoning power). That rigorous systematic, sustained and motivated study trains and disciplines the mind is accepted. However to maintain that a particular subject or field of study does so effectively and others do not is being questioned. It is not what you study but how you study that counts; it is not what is taught but how it is taught that counts.

There is no evidence that mental training and discipline acquired through intensive and extensive study in a field of learning automatically transfers to other situations. A person may be a fox in one situation and an ass in another.

Transfer

Transfer refers to transfer of knowledge, skills, ideas acquired in one situation to another situation. To speak in the language of commerce, it is a 'carried over' (CO) – brought forward (BF) transaction of learning.

Transfer of Knowledge

 - Knowledge to Knowledge

 A mastery of mathematics helps the learner in following lessons in physics easily. It is a case of transfer of knowledge to knowledge (similarly there can be transfer from History to Political Science; Political Science to Public Administration; Psychology to Sociology; Psychology to Literature; one literature to another and so on).

 - Knowledge to Skill

 Theoretical knowledge can be transferred to a practical skill. A knowledge of TV technology (theory) can be transferred to a skill – namely TV servicing (Practice). In Mathematics or Physics the student learns (under the topic, 'Projectiles') that the angle of projection must be 45° for maximum horizontal range. This knowledge is transferred (applied) to the skill of Javelin throw, shot put and the like.

 - Knowledge to Attitude

 Suppose you are taught the history of a country. Naturally the teacher talks about the people (citizens) of the country – their manners, customs, culture and general characteristics. If these general characteristics appeal to you, then you develop a positive and favourable attitude towards those people. Usually such a transfer is incidental (unconscious/indirect) and not intentional or deliberate (conscious /direct).

 - Knowledge to Behaviour

 The purpose of moral instruction (or ethical studies or value education) is to transfer knowledge of right and wrong to the behaviour of the individual. This transfer, definitely, is not automatic. In most cases it does not just happen. There are people who talk about character (they seem to possess a sound knowledge of character) but most of such people lack character in their personal and professional life. (There is no transfer from

knowledge to behaviour). Such knowledge is not committed knowledge (knowledge acquired with no sense of involvement) and it is of no use so far as art of living (on ethical lines) is concerned.

Transfer of Skills (techniques, habits and methods)

Proficiency in one game can be transferred to another (if similar skills are involved). Driving skill from one type of vehicle to another can be transferred. Study habits and methods employed in mastering a subject of study can be transferred to other subjects of study of similar nature. Technique of learning a language can be transferred to another of similar structures.

Transfer of Attitudes

Attitudes learnt is one situation can be transferred to a similar learning situation. Basic human values and positive attitudes must be transferred from situation-to-situation; then only the objectives of education will be realized. Such a transfer depends upon various factors – the teacher, the academic content and activities, the way the content is presented and activities organised and conducted and above all the teacher's perception and willingness to transfer.

On the basis of experimental evidence three types of transfer are identified:

1) Positive   --- 2) Negative   -------- 3) Zero

In positive transfer what we have learnt in the first situation facilitates the second learning situation. It may be knowledge, skill or attitude.

In negative transfer what we have learnt in one situation affects the second learning situation (habit interference). When the structures of two languages are conflicting there will be negative transfer from one to the other.

In zero transfer (no transfer) what we have learnt in one situation neither facilitates nor affects what we try to learn in another situation. (For example there will be no transfer from Algebra to ping pong, or from History to music).

Theories of Transfer

- Throndike's Theory of Identical elements

Throndike's experiments on transfer emphasize the presence of common elements or identical elements in the two situations for effective transfer. There will be transfer from one learning situation to another only when there are elements common to both. The amount of transfer depends upon the size of identical or common elements in the two situations. Thus there is more transfer from Mathematics to Physics than from Mathematics to Chemistry since the number of identical elements in Mathematics and Physics is greater than the number of identical elements in Mathematics and Chemistry; more transfer from Economics to Commerce than from Economics to Geography; more transfer from History to Political Science than from History to Sociology.

Judd's Theory

Mere presence of identical elements will not be enough; it must be perceived by the learner. Learner perception of similar elements and his willingness and ability to transfer the similarity form the basis of Judd's theory of generalization.

In his typical experiments , he trained a group of students in hitting a target placed under water. Based on performance he divided them into two sub-groups equally matched (on their skill to hit a target under water). Then one sub-group was instructed to continue its training. The other sub-group, in the meantime, was taught a unit in Physics – 'Refraction of light'. In the third phase of the experiment the two sub-groups were tested for their skill in hitting a target under water. The sub-group which was exposed to 'Refraction of light' did better. It must be noted here that not all the

members of their group were superior to their counterparts in the other sub-group. Resourceful members of this sub-group were able to generalise and apply their knowledge of refraction of light to the skill of hitting a target placed under water. And this transfer ability was called generalziation by Judd. Hence this theory was called theory of generalization.

Educational Implications

There is transfer when principles and ideas acquired in one situation are applied to another situation. There is more transfer when applications are pointed out. Experience, knowledge and habits gained in one situation help us to the extent they can be generalized and applied.

A teacher who has learnt the psychology of learner behaviour and the principles of learning should be able to apply this knowledge to classroom situation and teach effectively. One's ability to generalize is an index of one's intelligence. Instruction and explanation help students apply ideas and principles to specific situations.

There is more transfer for the bright than for the average; more for the average than for the dull. Experience facilities transfer. Mere rote learning is of little value. Resourcefulness and insight into the meaning of the content of the subject matter facilitate transfer. The Readiness of the learner and his interests are to be given consideration.

Transfer can be achieved if learning is meaningful and relevant. The learner must understand what is taught. A resourceful teacher will provide striking illustrations from vital experiences of life.

Transfer from knowledge to knowledge helps the learner mastering other subjects of study. But this is not enough. For success in life knowledge is to be transferred to skill, attitude and such other affective areas. Cognitive factors are to be transferred to affective and psychomotor domains of human behaviour.

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We are teaching for transfer. If transfer does not take place, then the very objectives of teaching (various subjects of study) stand defeated. We teach the various subjects of the syllabus not only for knowledge and skills but for the development of certain attitudes and values.

The affective implication of Mathematics teaching is Mathematical attitude (clarity, brevity, accuracy, preciseness and pointedness). The affective implication of Science teaching is Scientific attitude (observation, experimentation, objectivity, intellectual honesty, openmindedness). The affective implication of History is Historic sense (willingness and ability to predict future on the study of the past and understanding the present; a positive attitude towards peoples of all countries; appreciation of different cultures, sympathy and empathy for the suffering humanity). Every (cognitive) subject of study has affective implications. Teachers of the subjects concerned must be aware of such affective implications and must incorporate them in their techniques of teaching. In short transfer does take place; it must take place; but it is not automatic; the teacher has to work for it.

Questions:
1. What is meant by transfer of learning? (in about 75 words).
2. Briefly outline intra domain and inter domain modes of transfer of learning (in about 450 words)
3. Identify and illustrate the three types of transfer (in about 150 words).
4. Distinguish between Throndike's theory of identical elements and Judd's theory of generalisation (in about 450 words)
5. What are the educational implications of transfer of learning? (in about 150 words)

SECTION VI
PSYCHOLOGICAL CORRELATES OF EDUCATION

-Motivation

-Intelligence

-Personality

-Interests, Values and Attitudes

- Mental Health

CHAPTER 21
MOTIVATION

Content outline: Motivation – Need, Drive and Motive – Motivational cycle – Types of motivation – Factors affecting motivation – Forms of motivation – Maslow's hierarchy of needs – McClelland's Achievement motivation – Motivational functions of teachers – Motivation in the class room.

Three basic factors are related to motivation:

- Need, Drive and Motive.

Need refers to lack of something, absence of something, non-availability of something which is essential or desirable. Needs may be physiological if they are related to the body, psychological if they are related to the mind, sociological if they are related to interpersonal relations. Needs are not needs if they are not perceived as such by the individual.

Any individual will make an attempt to meet his need only when there is a drive in him. Drive refers to the psychological force which impels him to initiate action to meet his need. In absence of a drive the individual will not plunge into action towards meeting his need.

Motive refers to a thought or feeling which generates a drive in the individual, and this drive, in turn, will impel the individual towards action to meet his need.

Motivation is the process of instilling appropriate motives in the individual, which are likely to facilitate corresponding drives which, in turn, are likely to make the individual initiate action towards meeting his needs.

Here is an illustration: The need of a low achiever is improvement in his academic achievement. Here is one who does not take any measure towards this goal since the need is not perceived by him and hence there is no drive. The school counsellor has a series of sittings with him. He convinces him of his capacity to score a higher grade and outlines the positive consequences of a better academic achievement – higher education, employment, better social status and image and so on. In other words, the counsellor instils an appropriate motive in the low achiever. Consequently this drives him to action towards meeting his need – hard systematic work followed by a higher score.

Motivation Cycle

Motivation is also viewed as a cyclic process. Motivation begins with a need (drive, motive). This gives rise to an instrumental behaviour (any target oriented behaviour), which, if successful, leads to a goal. This, in turn, relieves the need. When one need is met, another need emerges and the cycle follows:
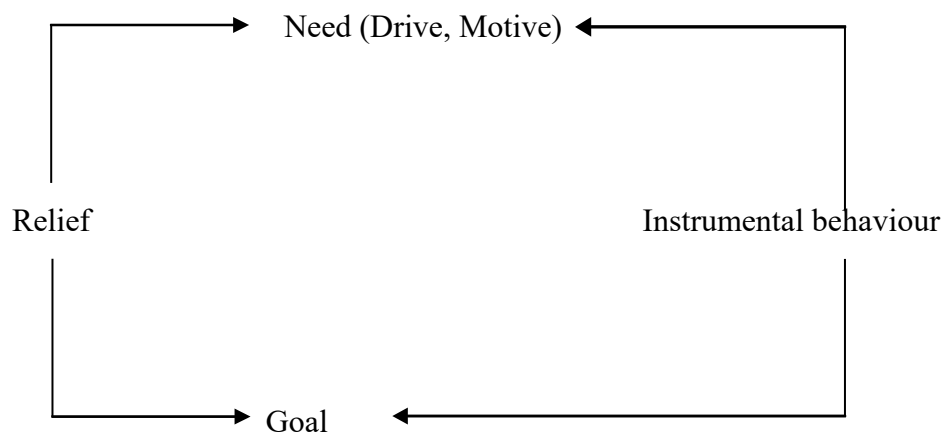
Types of Motivation
Immediate Vs. Remote

Immediate motivation refers to a situation where an individual is interested in learning a skill to solve a current, immediate or fast approaching problem. A student devotes his attention to studies by burning midnight oil for the examination of the following day.

Remote motivation capitalizes on long time goals. A student is particular about his mastery of Mathematics right from middle school stage as he aspires to join an Engineering college after Higher secondary. His friend is particular about this mastery of Biology at the higher secondary stage (even earlier) as he aspires to join a Medical college. A third student is particular about his mastery of English (written and spoken) right from his secondary stage since he aspires to appear for civil services examination later. All the three are likely to reach their goals in around 7 years hence their goals are fairly remote.

Longtime goals are of course powerful force of motivation but they must be reinforced periodically by immediate motivation. Immediate motivation and remote motivation are not contradictory but complementary. A series of sequentially linked immediate goals, if reached in a phased manner, will lead the individual to his remote goals.

Intrinsic Vs. Extrinsic

Intrinsic motivation is directly based on learning the activity or the subject. Achievement in the activity or task is its own reward. Achievement is an end itself, not a means to an end; individual derives pleasure in performing the task; he is not bothered about its outcome, its utility to him financially or otherwise. The individual feels he becomes himself while engaging in that activity – a kind of self-fulfillment (eg. Art for Art's sake and similar slogans). High achievers in every field (Great scholars, scientists, philosophers, Great political and social leaders) are

intrinsically motivated in their missions.

Extrinsic motivation refers to performing an activity, learning a subject because of the benefits, positive results which are useful to the individual in some way or other – prize, medals, incentives, financial benefits, other conveniences, social approval or avoidance of punishment or disapproval. Extrinsic motivation is a means to an end (not an end is itself).

Most of us – almost all of us are only extrinsically motivated. This equally applies to the student motivation. Teachers should periodically bring to the notice of the students the openings – job opportunities for high achievers in the subjects of study taught by them. This is one way of motivating them for study.

Some students may take off from extrinsic motivation into intrinsic if the course of study appeals to them (beyond job opportunities) and if teachers themselves are intrinsically motivated. Intrinsic motivation cannot be taught; it must be caught from others (especially from teachers). Extrinsically motivated students will prepare for the examinations; intrinsically motivated students will master knowledge of the subjects of study.

Successful and happy people, by and large, are intrinsically motivated in their work. There is absolutely no harm in starting with extrinsic motivation; but after a time we must take off and become intrinsically motivated. This will lead to success and happiness.

MOTIVATION

EXTRINSIC

Immediate

Immediate Extrinsic (A high score in a test)	Remote Extrinsic (A good job later in life)
Immediate instrinsic (Mastry of Knowledge and skills)	Remote Intrinsic (Excellent Job Performance later in life)

Remote

INTRINSIC

Factors Affecting Motivation
   - Level of Aspiration
   Setting up too high a goal beyond the potentialities of the individual will have disturbing effects causing frustration and disappointment. Such experiences bring in negative reactions like feelings of inferiority. Setting up too low a goal well below the potentialities of the individual will not challenge the individual and is likely to demotivate him. Level of aspiration must match the potential of the individual. In other words, it must be reachable if he is at his best (it must be reasonably high enough to challenge him, but not beyond his potential reach).
   -Pragmatic outlook
   Another factor is the practical value or usefulness of the knowledge or skill being learnt. Extrinsic motivation is based on pragmatic outlook.

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Forms of Motivation

- Reward and Punishment

Reward is commonly accepted as a positive form of motivation and punishment as a negative one. Good work is rewarded and bad work is punished. Individuals must realize that it is the quality of work that is rewarded or punished and not the individuals. This will make people who perform good work continue their good work and try to improve quality further and this principle will make people who perform bad work improve the quality of their performance gradually so that they too will be rewarded sooner or later (sooner than later). Unless absolutely essential, punishment is to be avoided. Young children may not fully understand why they are punished and they are likely to develop hostile attitude towards people who punish them.

- Social Motives

Praise and Reproof as indicators of social approval and social disapproval respectively constitute another form of motivation. High quality work of the gifted and some marginal improvement of the low achievers may be praised. Indifferent work of the gifted and stubborn and intentional poor work of the low achiever may be reproved. Praise and Reproof in school situations, students must understand, become approval and disapproval of society later.

- Competition

Competition, if healthy, is fairly effective as a motive at the school stage; but if it is carried beyond limits it may have undesirable effects on the personality of the individuals. Top achieving students, at times, indulge in malpractices in the examination hall because of pressure of topping the class. There are times when competitions become unhealthy. Sportspersons using drugs to win medals is another illustration of unhealthy competition.

In place of individual competitions, group competitions are being introduced. Competition may be placed by group work based on co-operation, team spirit and comradeship. The best form of competition is self-competition. Individuals must be encouraged to excel their previous performance. 'Top the list' is to be replaced by 'give your best'.

Maslow's Hierarchy of Needs

Maslow's approach to motivation was different from his predecessors' working on motivation. He studied highly motivated people, happy, positive-thinking going about their normal daily

routines on and off the job. He attempted to find why these people were so highly motivated, what made them tick, how they got that and why, and how they maintained this high state of motivation day in and day out. His theory was called theory of need gratification or growth motivation. Based on his study he structured a hierarchy of needs. He arranged these needs into a five level sequence as below:

Self-actualization needs

Self-esteem needs

Love and belongingness needs

Safety and security needs
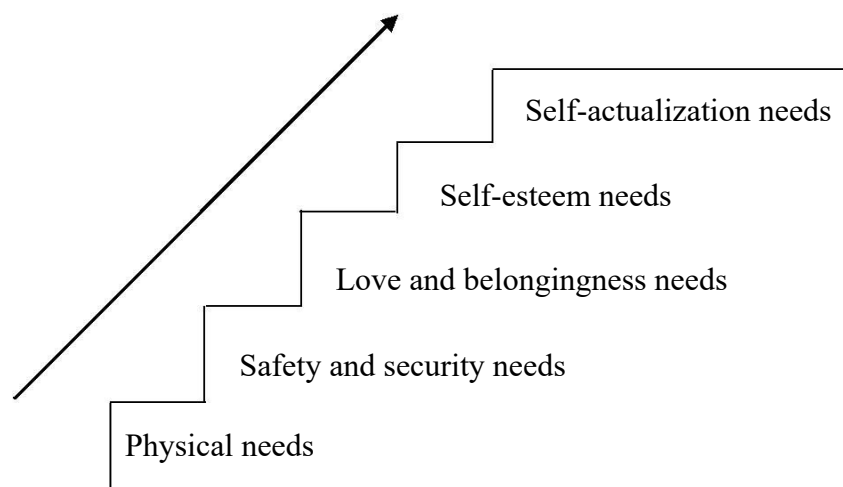
Physical needs

Physical needs refer to needs for food, sleep, health, exercise, rest and sex or any other need related to the body.

Safety and security needs refer to needs for physical safety and security, protection, comfort and peace, absence of threats or danger, orderly and neat surroundings.

Love and belongingness needs refer to needs for emotional safety and security, acceptance, belongingness, affiliation to a group, love and affection and group participation.

Self-esteem needs refer to needs for recognition, prestige, confidence, leadership, achievement, competence and success.

Self actualization needs refer to needs for self fulfilment, realization of potential, doing things for challenge, intellectual curiosity, creativity and aesthetic appreciation and the like.

The first two lower levels are called D needs (Deficiency). The subsequent three higher levels in the hierarchy are called B needs (Being). Satisfaction of needs follow a definite sequence – hierarchy – from the lowest to the highest. Only when the needs at a particular level are satisfied the individual will think of making an attempt to meet the needs of subsequent higher levels. According to Maslow, forcing individuals to meet their needs 'out of order' (skipping the hierarchy) was a major reason why people were poor in their performance and experienced frustration, hostility, indifference and other negative reactions. If, on the other hand, these needs were met in order as indicated in the hierarchy of Maslow, individuals would co-operate, follow positive ways of conducting themselves and move towards the higher levels of motivation. Highly motivated subjects showed greater satisfaction and interest in helping others. Less motivated people were more self-centered and tended to use negative and socially unacceptable means in meeting their needs. Maslow arrived at this conclusion: Getting people to co-operate, help others (motivating them) is a matter of helping them move form the lower needs upward to the higher needs following the hierarchical sequence. According to

Maslow, "we do not motivate anybody; people are motivated by their own needs". Our job, as a motivator, will be to identify the need level where people have got stuck up and help them move up. Parents must see to it that the legitimate needs of children are met reasonably well. Reasonably nutritious food, healthcare, exercise, sleep and rest are the legitimate basic needs of children. Reasonably a good residence – pollution free and hygienic conditions around will give them physical safety and security. Conducive emotional climate at home marked by love and affection will meet the psychological needs of children. Recognition for good work and adequate support and opportunities for activities of their choice based on interest and aptitude will meet the self-esteem needs of children. Conducive home climate – cognitive, aesthetic and emotional will help children reach self-actualization.

Whatever is advocated to parents is equally applicable to teachers and close relatives. Teachers must be sensitive to individual differences. Children differ from one another in family background, socio-economic status, degree of maturity, intelligence, personality, aptitude, attitude, interests and such other factors. Teacher should find the need level where the learner has got stuck up and employ resourceful motivation techniques to help him move up.

McClelland's Achievement Motivation :

According to McClelland, achievement motivation is the desire to attain a specific standard of excellence. Individuals differ from one another in achievement motivation. Achievement motivation is not inborn or inherited. Heredity or nature does not play any significant role in achievement motivation. Achievement motivation can be cultivated in individuals by environment (nurture) by creating a conducive atmosphere (or climate) for instilling the motive to achieve.

Achievement motivation constitute three components

(drives) – cognitive, ego-enhancement, affective. The cognitive achievement refers to knowledge mastery in the chosen field, intellectual pursuits, academic achievement and the like. The ego-enhancement drive refers to the need for improving the image of the individual in social status, through achievement. The affective drive is to win social approval through love, affection and other finer emotions.

The most popular methods for measuring achievement motivation have been projective techniques. An ambiguous (vague) picture is presented to the subject and he is directed to write on "what is happening? What is being thought of? What has led to this situation? And what will happen? Pictures suggested a work situation (Psychomotor domain – men working at a machine), a study situation (cognitive domain – a boy seated at a desk with a book in front of him) and a father – son situation (affective domain). The responses are analyzed to find the degree of achievement motivation and the domains of his choice.

Too much pressure or too much perceived pressure may result in low achievement motivation. Other factors which influence achievement motivation are the gender of the learner, size of his family, occupation of parents, culture, his intelligence, attention, attitude and interest.

Attempts to develop the motive to achieve are most likely to succeed if the individual meets the following conditions:

- Understand that the new motive is realistic and reasonable.
- Can clearly specify the various aspects of the motive.
- Can link the motive to related functions in every day life.
- Sees the motive as an improvement of his self-image.
- Commits himself to achieving concrete goals related to the newly formed motive.
- Keeps a record of his progress.
- Works in an atmosphere of support.

Implication for Education

Motivation can be increased by increasing the need for achievement. Motivation can be developed in stages in a phased manner, through deliberate training programmes and incidental classroom interaction. Training in behaviour on how to take moderate risks, how to develop self-confidence in one's ability to solve long range problems, how to be challenged by moderately difficult tasks, how to look for feed back in one's long range performance would help the individuals develop a need for high achievement.

Motivational Functions of the Teacher

Arousal function – To energise the students for their learning, teachers should guard against monotony and boredom, becoming frantic or overanxious; it refers to the general state of excitability – general level of alertness, responsiveness, wakefulness or diligence. Teachers must be sensitive to individual differences in learning. They must be resourceful in class room teaching, maintaining a conducive class room climate for effective learning and employing a variety of teaching techniques ensuring student involvement and attention. Teaching is to be learner-centred not teacher-centred .

Expectancy function

Expectancy is a cognitive anticipation usually aroused by cues in a situation that performance of an act will be followed by a particular consequence (If I work hard, I will get high scores). Post-success conditions the students to more realistic increases in their expectancies. Post-failure over a time conditions the students to lower their expectancies. The expectancy function of the teacher requires him to relate intermediate experiences to immediate and remote goals of the students and to energize their best efforts in learning.

Incentive Function

Incentives are actually goal objects. They may be concrete or symbolic. The vigour of an activity is affected by the effect of the incentive provided. Incentives may be viewed as positive or negative. Teacher's praise, approval provide satisfaction and hence it is positive. The negative ones provide a sense of relief-submitting an assignment in time to avoid teacher's reproof or disapproval. Teacher incentive function must match the ability of the student – praise, reproof, encouragement, competition, co-operation feedback of test results to be judiciously used.

Disciplinary Function

Punishment is a stimulus the individual seeks to escape or avoid. Suppression of the undesired response and the provision of an alternately rewarded response may be the most effective procedure. Artful combination of punishment and reward as a disciplinary technique is called restitution. As punishment has a ripple–effect, non-threatening techniques may be employed.

Motivation in the Classroom

Teachers, if intrinsically motivated in their subjects of study, can intrinsically motivate their students to gain mastery in their subjects.

Teachers can make learning meaningful by applying pedagogic principles of learning. This will motivate students to learn.

By employing appropriate techniques of teaching, teachers can interest the students and develop in them a positive and

favourable attitude towards learning.

Setting before the students specific learning objectives and reinforcing their longtime goals by immediate goals, teachers can motivate the students.

Ego-involvement or self-concept of the students is a powerful motivating device.

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Teacher personality plays a vital role in motivation. If he is impressive, pleasing with effective communication skills he can easily motivate his students.

Questions:

1. What is meant by motivation? Identify the sequential factors which lead to motivation (in about 150 words).

2. What is meant by Motivation Cycle? (in about 150 words).

3. Distinguish between immediate motivation and remote motivation. (in about 150 words)

4. Distinguish between intrinsic motivation and extrinsic motivation. (in about 150 words).

5. Identify factors which influence motivation. (in about 150 words).

6. What are the different forms of motivation? (in about 150 words).

7. Outline Maslow's hierarchy of needs. What are the motivational implications of this hierarchy? (in about 450 words)

8. Briefly explain McClelland's achievement motivation. By what method is AM studied? What are the educational implications of McClelland's AM? (in about 300 words).

9. Outline briefly the motivational functions of teachers (in about 450 words).

10. Write a short note on 'Motivation in the class room'. (in about 150 words).

11. Are Maslow's theory and McClelland's theory contradictory or complementary? (in about 300 words)

<u>Ps</u>.

     McClellend's ' Achievement Motivation' and Maslow's ' Self – Actualization' as theories of Motivation are not Contradictory but Complementary. They focus on two vital life goals – Success and Happiness 'Achievement Motivation' leads to success; 'Self – Actualization' leads to Happiness Success is not success if it does not bring one Happiness. Motive to achieve through Self – actualization and self – competition will make one successful and happy.

CHAPTER 22
INTELLIGENCE

Content outline: Intelligence – Definitions – Structure of Intelligence– Spearman's, Thurstone's – Types of Intelligence (Thorndike) – Guilford's structure of Intellect – Multiple Intelligence (Gardner) – Emotional Intelligence – Stretching the definition of Intelligence -Testing of Intelligence – I.Q. – Constancy of IQ – Distribution of I.Q. – Types of Intelligence Tests – Limitations of Intelligence Tests – Differential Studies – Potential and Functional Intelligence – Uses of Intelligence tests – Aptitude Tests.

Intelligence is different from knowledge though it is related to it. Knowledge refers to stock of ideas, store of ideas, the apperception mass of an individual. Intelligence is not knowledge but the ability to acquire knowledge and use it on requirement. Wisdom refers to right use of intelligence (and knowledge) with a sense of discrimination between right and wrong, good and evil. It has ethical implications.

Intelligence has been variously defined – as an adjustment or adaptation of the individual to his total environment, as the ability to learn, as the ability to carry on abstract thinking. There are around one hundred definitions on intelligence – definitions furnished by psychologists. Here are two comprehensive definitions: According to Wechsler, intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with environment. The implications of his definition are: Intelligence is an overall capacity; it has three equally important components – purposeful, goal oriented, objective-oriented, meaningful activity; applying reasoning to thinking and subsequently to acting (as opposed to emotionality); ability to pull on nicely in society with a high degree of adjustment. According to Stoddard, intelligence is the

ability to undertake activities that are characterized by difficulty, complexity, abstractness, economy, adaptiveness to a goal, social value, emergence of originals and to maintain such activities under conditions that demand a concentration of energy and resistance to emotional forces. This definition seems to be the most comprehensive definition. It implies: Intelligence is manifest in activity; not any activity but difficult activities and complex ones (more than one difficulty); it is manifest in abstract activity; economy refers to economy of time; it implies the speed with which an activity is performed by the individual; intelligent activity is a goal oriented activity; it has social implications (socially useful and valued); it must have a mark of originality; an intelligent activity requires concentration of energy and an ability to remain unemotional – cool, calm and collected.

Psychologists made serious attempts to define intelligence. Each definition attempts to emphasize one or more aspects of intelligence which the psychologist thought to be prominent or of prime importance. This is applicable to even the comprehensive definitions discussed. A clear understanding of intelligence is likely to emerge if attempts are made to study the structure of intelligence and the types of intelligence.

Structure of Intelligence:

Mental ability is analysed to determine its underlying factors. In other words, the purpose of this analysis is to discover the elements or components of intelligence.

According to multifactor theory of Thorndike, intelligence constitutes a multitude of separate factors or elements each one being a minute element of ability. A mental act involves a number of these minute elements operating together. If performance on any two tasks are positively correlated, the degree of relationship is due to the number common elements involved in these two tasks (transfer of learning: theory of identical elements).

According to the Two factor theory of Spearman, all

intellectual activity depends primarily upon and is an expression of a general factor denoted by the symbol G possessed by all individuals but in different degrees. Mental tasks differ in respect to their demands upon this general factor. Spearman characterized this general factor as mental energy. This general factor G is involved in all cognitive performances. In addition every intellectual activity is also found to involve one or more specific factors related to that activity, referred to as S. Different cognitive functions will require different 'G' loadings. Certain operations like arithmetic reasoning or even vocabulary require a high G loading. Musical appreciation may depend more on a special ability and less on G. G relates to one's ability for seeing relationships. Relations and correlates are the two basic operations depending on G. According to Spearman only tests, which are designed to test the ability to deduce relations and correlates will be able to measure G loading that an individual possesses.

Thurstone's Primary Mental Abilities

Intermediate between these two theories (Thorndike and Spearman) are the group factor theories. Prominent among them is that of Thurstone's. His work has resulted in the construction of a set of measures called tests of primary mental abilities. Intelligent activity is not an expression of innumerable highly specific factors as Thorndike conceived of nor is it an expression of primarily of a general factor that pervades all mental activity and is the essence of intelligence as Spearman held. Instead certain mental operations have, in common, a primary factor that gives them a psychological and functional unity that differentiates them from other mental operations. These mental operations constitute a group and are denoted by 7 letters – NVWMSPR.

N – Numerical ability – ability to perform fundamental operations (with integers, fractions and decimals) with ease and accuracy.

V – Verbal comprehension – ability to define and

understand the meanings of words, phrases, sentences, thought contained in a paragraph.

W – Word fluency – ability to think and use words rapidly – word power – a rich vocabulary.

M – Memory – ability to register, recall and recognize materials.

S – Space factor – ability to deal with three dimensional figures – to draw a design from memory or to visualize relationships.

P – Perceptual factor – ability to grasp visual details and identify similarities and differences between objects.

R – Reasoning (inductive and deductive) – ability to find rules, principles, concepts for understanding and solving problems.

No individual is equally proficient or equally deficient in all the seven primary mental abilities – factors of intelligence identified by Thurstone.

Types of Intelligence

Thorndike identified three types of intelligence – abstract concrete and social.

Abstract intelligence refers to the ability of the individual to understand and deal with verbal and mathematical symbols; to deal with thoughts and ideas (abstract concepts).

Concrete intelligence (practical, mechanical) refers to the ability of the individual to understand and deal with things as in skilled occupations and mechanical appliances.

Social intelligence refers to the ability of the individual to understand and deal with people.

No individual is equally proficient or equally deficient in all the three types of intelligence identified by Thorndike.

Individuals who have a high degree of abstract intelligence shine in academic and intellectual pursuits.

Individuals who have a high degree of concrete intelligence

shine in mechanical work and practical fields.

Individuals who have a high degree of social intelligence shine in fields which require healthy interpersonal relations and ability to deal with people.

Guilford's Structure of Intellect - Three Faces of Intellect.

CONTENT

PRODUCT

OPERATION
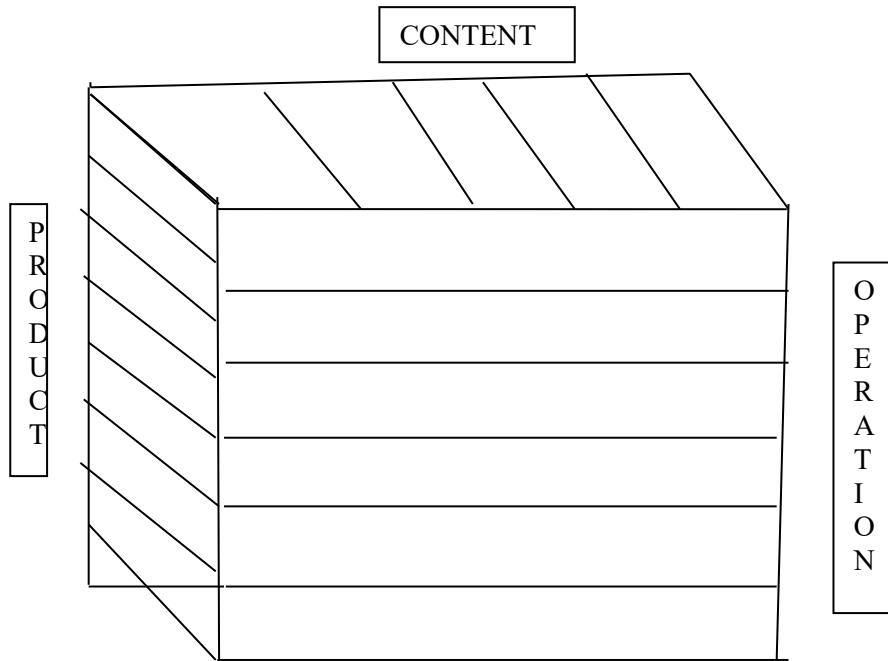
Cognition

Guilford conducted a series of studies and classified all intellectual abilities into a systematic framework called 'The Structure of Intellect' (the three faces of intellect). According to this model human intelligence can ultimately can be broken into 120 factors; not all of them have been discovered as yet.

Guilford classified intellectual factors in three different ways: - Content, Operation, Product.

(i) Content refers to the kind of information involved. Fourdifferent types have been identified.

- Figural – involves concrete objects.
- Symbolic – information represented by means of symbols, as in mathematics.
- Semantic – meanings , verbal comprehension and general reasoning.
- Behavioural – similar to social intelligence of Thorndike.

(ii) Operation – Five types of operation that can be performed on a particular bit of information.

- Cognition (understanding and comprehension)
- Memory
- Covergent production (ability to derive one right solution to a problem from the information provided)
- Divergent production (Devising a number of possible solutions to the problem posed by a particular set of information. This is believed to be a vital factor in creative thinking).

The result of convergent or divergent

production is production of new information.

        - Evaluation (involving judgements as to accuracy,
             goodness, suitability or workability)

(iii)   Product

        There are six different forms which each type of content may take – referred to as products.

- unit – a single item of information
- class – a group of units with common properties
- relation – information may also come in this form
- system – between two things, or more complex involving a number of parts.
- transformation – information involving some form of change
- implication – involving possibilities offered by a piece of information.

Multiple Intelligence (MI)

Howard Gardner coined the term Multiple Intelligence (s), each relatively independent of others - word smart, number smart, music smart, space smart, body smart, self smart, people smart, and nature smart. Thus the eight forms of MI are Linguistic, Logical - Mathematical, Musical, Spartial, Bodily - Kinaestheitc, Intrapersonal, Interpersonal, and Naturalistic. Gardner also speculates about a ninth possible intelligence – "existential intelligence" –" the ability to ponder large questions about life, death, existence".

Emotional Intelligence (EI)

Peter Salovey and John Mayer Coined the term Emotional Intelligence - the ability to perceive, express, understand and regulate emotions. According to them "Intelligence" can be classified into "Intellectual" (Thorndike's Abstract) and

"Emotional" (Thorndike's 'Social'). The five basic components of Emotional Intelligence are self - awareness, self - regulation, motivation, empathy and social skills. Self – appraisal inventories to assess one's Emotional Intelligence and subsequently assess one's E.Q. (Emotional Quotient).have been structured.

Stretching of the definition of Intelligence

Traditional Psychologists are not happy at the stretching of the conventional definition of Intelligence. They feel that Intelligence refers to mental abilities. According to them non - mental abilities need not be included in it since they may be included in (special) "talents" or "aptitude". They are not happy over the attempts being made by several modern psychologists to include whatever ability they value (whether mental or non - mental) in "ntelligence" since there is a prestige tag attached to it. They do agree that there are several non - mental abilities which facilitate success and happiness in life but this does not justify their inclusion in "Intelligence" However, inspite of their protests, "Intelligence" has, today, crossed its cognitive borders and has occupied the "affective" and psychomotor domains. For example today E.Q. (Emotional Quotient - an index of E.I.) is as important as I.Q. ("Intelligence" Quotient) and at times often more important than I.Q. for success and happiness in life.

Testing of Intelligence

Credit for construction of the first individual intelligence scale goes to Alfred Binet. With the assistance of Theodore Simon (a physician) he published the first edition of the now famous Binet-Simon Intelligence Scale in 1905. There were limitations in the original scale. Hence Binet and Simon revised and improved their scales in 1911. Binet arranged his tests in what is called age scale. Test items were assembled for different year levels and a child's intelligence was determined by the age level he could attain. Binet and Simon developed the concept of mental age. A mental age of 9 means that the child can do the tasks regarded as

appropriate of 9 years. There have been a number of revisions of Binet's original scale. In 1917 Terman of Stanford University revised the scale (Stanford-Binet tests). A more extensive scale with two forms (equivalent) was developed by Terman with the assistance of Merrill in 1937 (Terman-Merril scales). In 1960 another revision was done.

With Binet-Simon scales and later revisions as frames of reference, psychologists and educationists throughout the world have structured and validated a series of intelligence tests. Arnold Gesell constructed intelligence tests for children upto 3 years. Wechsler structured intelligence tests for adults (average adult and superior adult).

Intelligence Quotient

Intelligence quotient was originally defined as ratio of mental age with chronological age (as revealed from the date of birth of the child).

Intelligence Quotient = Mental Age / Chronological Age Later it was multiplied by 100 to arrive at whole numbers.

Intelligence Quotient (I.Q) - $\dfrac{\text{Mental Age}}{\text{Chronological}} \times 100 \; ; \; \dfrac{MA}{CA} \times 100$

In 1916 Binet-Simon revised format there are tests from 3 year level to 14 year level; in addition tests for average adult (CA = 16.5) and superior adult (CA = 19.5). Each year level consists of 6 subtests. If a child passes one test it is given a score of 2 months (towards his MA). There are no tests for age 11 and age 13. Hence at the 12 year level the child is given a score of 3 months for passing one subtest (there are 8 subtests for the 12 year level). Similarly a child is given a score of 4 months for passing one subtest at the 14 year level (there are 6 subtests for the 14 year level). The examiner goes down in the test until the level is

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reached where the subject passes all the items. This is called the basal year. The examiner then proceeds upward in the scale until the level is reached where the subject fails all the items. This level is called the terminal year. Each test carries specific credit, in terms of months, contributing to the mental age score. These credits are added to the age value of the basal year. The total is the mental age.

The psychologist makes the child feel at home and administers the tests in accordance with the established procedure. If the child is judged to be below normal the test begins with the items well below those designed for his chronological age level. Should the child appear average the first items administered are those meant for children just one year below his chronological age level. The objective is to give the child a taste of success in the initial stages of testing so that he will be motivated best.

Here is an illustration for calculation of I.Q.

Age of the child = 6 years (C.A.)

Mental Age

3 year level – all tests passed   ---
4 year level - all tests passed   ---
5 year level – all tests passed

(Basal year – full credit) ....5 x 12 = 60
6 year level – 5 tests passed ………..5 x 2 =   10
7 year level – 3 tests passed..............3 x 2 =   6
8 year level – 1 test passed................1 x 2 =   2
9 year level – No test passed ………0 x 2 =   0
(Terminal year)   78

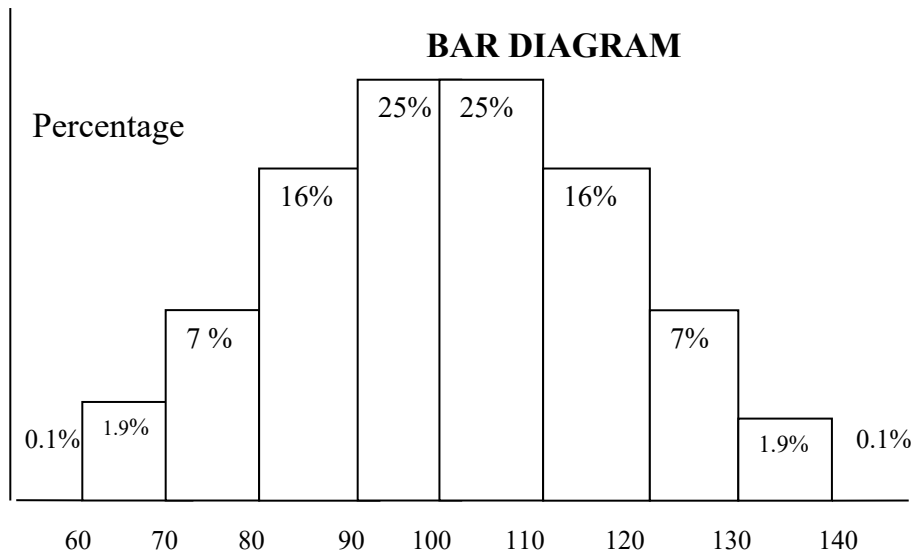$$IQ = \frac{MA}{CA} \times 100 = \frac{78}{72} \times 100$$

Constancy of Intelligence Quotient

It is seen that the mental age is increasing with

chronological age but not the intelligence quotient. This is known as the constancy of intelligence quotient. This concept has raised a number of problems – the limits of the mental age. Physical growth and development stops mostly by the time the individual reaches the later adolescent stage. Similarly the mental growth also stops somewhere between 16 and 20. This does not mean that the adult above 20 is intellectually the same as he was in his 16th year. His capacity may be the same but his actual achievement will naturally be different because of experience and learning. So as a practical device in computing the intelligence quotient of an adult, chronological age is always taken to be 16 or 18 or 20 depending upon the nature of the test used (average adult, superior adult). Measured I.Q. is constant because mental age increases in parallel with chronological age. Mental age reaches the maximum limit by the age of around 20 and it remains more or less the same for a period of 10-20 years. The degree of decline thereafter depends upon factors like health (physical), motivation, interest, attitude and the like.

Distribution of Intelligence Quotient in General Population

If we measure intelligence of a large number of people forming a good representative of the general population and plot

the results in the form of a graph, we get one that assumes a definite shape. This is called the NPC (normal probability curve)

-bell shaped and symmetrial

– bell shaped and symmetrical. Or a Histogram / Bar Diagram

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BAR DIAGRAM

Percentage

```
                          25%  25%
                   16%              16%
            7 %                          7%
   0.1%  1.9%                          1.9%   0.1%
   60    70    80    90   100   110   120   130   140
```

I.Q.

Intelligence Quotient:

90 – 110	- Normal (50% of the population)
110-120	- Above Normal
120-130	- Superior (Bright)
140 above	- very superior (Brilliant)
80-90	- below normal
70-80	- Dull
60-70	- Borderline
Below 60	- Mentally Retarded

Only rarely one in one thousand we find either a genius (brilliant) or an extremely feeble minded person (mentally retarded). MR (the mentally retarded) can be classified into three categories – educable, trainable, custodial.

Educable MR are those dull children who will learn something if intensive and extensive instruction is offered by

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teachers with patience through drill, review and repetition (recurring learning experiences). To that extent they are educable. We can make their heads function.

Trainable MR are not educable in the sense we cannot make their heads function. But their hands can be trained. We can make their hands function. They may be trained in some semi-skilled or unskilled work which requires training in motor activities.

Custodial MR can neither be educated nor trained; they are permanent social liabilities; they must be in the safe custody of elders of the family or others. They cannot even protect themselves from danger or threats – infrahuman in behaviour though human in physique.

Group Tests and Individual Tests

Intelligence tests can be classified under categories of group tests and individual tests. These two types of tests have been constructed mostly to meet practical necessities. If a large number of subjects are to be tested, it would be more convenient to test them in large groups to save time. But under certain situations as in a guidance clinic each individual must be tested separately.

Verbal and Non-verbal Tests

Non-verbal tests were developed when people of different languages or those not good at verbal ability had to be tested. Non-verbal tests are also called performance tests (paper and pencil tests) since in these tests one has to perform some kind of motor activities for which directions are given. The test items involve the same factors of intelligence.

Limitations of Intelligence Tests

Three main objections are levelled against Stanford-Binet revision.

- A child who comes from a better environment will be in a more advantageous position than another from a comparatively ill equipped home. As against this objection tests are devised to

- measure the factors of intelligence or primary abilities rather than knowledge.
- Children who have a better vocabulary will have an undue advantage since all these tests are verbal. To meet this objection various types of non-verbal tests have been developed.
- The tests of Binet and Terman are, to a large extent, bound by cultural factors. As such they can only be used within a particular area. Some psychologists have attempted to construct tests avoiding influences of cultural factors calling them culture free tests (free from one particular culture) or culture fair tests (fair to all cultures).

Differential Studies

Studies have indicated that there is no gender difference in intelligence. If a random sample of boys and girls is chosen and an intelligence test is administered to the sample, it will be found that the average Intelligent quotient of boys will be almost equal to average Intelligence quotient of girls. Male superiority in certain factors like N, S, R and female superiority in certain the factors like V, W, P as findings of earlier research studies have now been exploded. Teacher evaluation of the intelligence of an individual is not to be based on sex or gender but to be based on performance.

Studies have further indicated that there is no particular race, community, culture or caste superior to others in intelligence.

Potential Intelligence and Functional Intelligence

We come across a few students (boys and girls) who happen to be below average at the primary level in respect to their academic achievement. They become average students at the secondary school level. They become above average (some of them even superior) students at the higher education level. They are called 'late bloomers'. They seem to have become more intelligent gradually. But, intelligence quotient is constant. The apparent increase in their Intelligence quotient is definitely a

fallacy. The fact is that they have been intelligent right from the beginning but unfortunately the classroom climate at the lower level has not been conducive for using their mental abilities. When the class room climate gradually becomes conducive it gradually unfolds their mental abilities. Their potential intelligence starts functioning. Garrison identifies two levels of operation of intelligence – potential and functional. If intelligence remains only as a potential but does not function it is of no use. Here is an illustration; there are two individuals A and B. A has an

Intelligence quotient of 130 and B has an Intelligence quotient of

120. B is a success; A is not a success. How do you account for it? B makes the best use of his Intelligence (his potential functions) but A does not make the best use of his Intelligence (his potential does not function). Home climate, classroom climate, campus climate and social climate must be conducive for effective functioning of potential intelligence. Success in life depends upon one's ability to convert potential intelligence into functional one.

Uses of Intelligence Tests

- Educational guidance: Students may be assessed effectively and given appropriate quality of work. It can also be found whether a student's failure is due to lack of required mental ability or due to lack of application to work (lack of interest).
- Vocational guidance: Intelligence tests are used in any judgement of vocational guidance and proper vocational selection.
- Study of personality: There are psychologists who consider intelligence an important component of one's personality (Cattell). Without a knowledge one's intelligence quotient it is not possible to get a clear picture of one's personality.
- Explosion of misconceptions: Modern intelligence tests have also helped us to discard old misconceptions on the

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superiority of male gender and superiority of a particular race, community, culture, or caste over the others Intelligence is gender free, race free, community free, culture free, caste free.

- Nature and Nurture: We have been able to study the relative influence of heredity and environment on

  intelligence. Nature and nurture are interdependent on functional intelligence.

- Concept of Intelligence: The process of test construction has sharpended and made clear the very concept of intelligence – composite nature of this general mental ability.

Aptitude

An aptitude is a combination of characteristics indicative of an individuals' capacity to acquire (with training) some specific knowledge, skill or a set of organized responses such as ability to speak a language, to become a musician, to do mathematical work. An aptitude test, therefore, is one designed to measure a person's potential ability in an activity of a specialized kind and within a restricted range.

Aptitude tests are to be distinguished from those of general intelligence and from tests of skill or profiliency acquired after training or experience. They should be distinguished from educational achievement tests, which are designed to measure an individual's quantity, and quality of learning in a specified subject of study after a period of instruction.

Aptitude is different from skill or profiliency. Skill means ability to perform a given act with ease and precision. Proficiency has much the same meaning, except that it is more comprehensive, for it includes not only skills in certain types of motor and mental activities, but also other types of activities as shown by the extent of one's competence in language and in different academic

disciplines. We may speak of one's proficiency in any type of performance. On the other hand when we speak of an individual's aptitude for a given type of activity we mean the capacity to acquire proficiency under appropriate conditions, that is, his potentialities at present as revealed by his performance.

The terms aptitude, ability or capacity mean more or less the same factor and are often used interchangeably. Aptitude is potential; it is revealed in performance; aptitude has future reference in that it sets limits of what a person will achieve when given opportunity and training. Achievement, on the other hand, is actual performance; it is what the person does regardless of his capacities. Aptitude is what one can do; achievement is what one does.

Intelligence tests (general mental ability tests) are usually employed in educational guidance and counselling.

They are limited in scope. For vocational guidance and counselling aptitude tests are largely being used. According to one school of thought, intelligence tests are only academic aptitude tests. DAT (Differential Aptitude Test) is being used today. Aptitude tests have been structured and validated to test aptitudes related to verbal, numerical, spatial, perceptual, artistic, aesthetic, musical, mechanical, social, scientific, clerical, managerial, practical and the like.

Questions:

1. What is intelligence? In what way is it different from knowledge and wisdom? (in about 75 words).
2. How is intelligence defined by Wechester and Stoddard? Briefly explain. (in about 150 words).
3. How is intelligence structured according to Spearman and Thurstone (in about 300 words).
4. How did Throndike typify intelligence? (in about 150 words).
5. Briefly explain Guilford's structure of intellect as a comprehensive approach to structure as well as types of intelligence.

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6.Write a short note on Gardeners's Multiple Intelligence? (in about 75 words).

7.What is meant by "Emotional Intelligence"? (in about 75 words).

8.How do modern psychologists stretch the definition of Intelligence? To what extent is justifiable (in about 150 words)

9.What is I.Q. ? How is it calculated? Illustrate. (in about 300 words)

10.What is meant by constancy of I.Q.? (in about 75 words).

11.How is I.Q. distributed in general population? Explain it through a diagram (in about 300 words).

12.Distinguish between group tests of intelligence and individual tests of intelligence (in about 150 words).

13.Distinguish between verbal tests of intelligence and non-verbal tests of intelligence (in about 75 words).

14.Explain the difference between potential intelligence and functional intelligence. (in about 75 words).

15.Identify the uses of intelligence tests. (in about 150 words).

16.What is meant by aptitude? In what way is it different from achievement? (in about 150 words).

17.Distinguish between (differential) aptitude tests and intelligence (general mental ability) tests in terms of their meaning, objectives and uses (in about 150 words)

CHAPTER 23
PERSONALITY

Content outline: Personality – Meaning and Allport's definition - Jung's typology- Typologies and Approach to Personality – Eysenk's dimensions-MMPI – Cattell's factors – EPPS; The Big Five Personality factors; CPI- Throndike and Hagen's segments of personality – Assessment of personality – Trait approach – Holistic approach – Methods of assessment – Interview – Rating scale – Behaviour inventory – Situational tests – Projective techniques – Rorschach – TAT – WAT – SCT – VPT – Personality profile –-Social learning theory - Integration of personality – The social – cognitive perspective.

The most distinctive feature of any individual is his personality. This is his overall pattern or integration of his structures, modes of behaviour, interests, attitudes, intellectual abilities and many other characteristics – the whole individual. Viewing a person as he goes about the various activities of everyday life we usually obtain a total impression of his personality as agreeable or disagreeable, dominating or submissive, explosive or cool, calm and collected, impressive or unimpressive, pleasing or displeasing and the like.

Allport defines personality as the dynamic organization within an individual of psychophysical systems which determine his unique adjustments to his environment.

The implications of his definition are: personality is dynamic (not static) – ever active, a changing continuum; it is an organized pattern of behaviour; both physical and psychic aspects of the individual determine his personality. The keynote of personality is his unique way of adjustment with his environment – the unique (his own) techniques he employs to maintain harmony – intra harmony (within the individual) and inter harmony (with the outside world).

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Personality, thus, refers to the total quality of an individual. It implies the physical, intellectual, emotional and social aspects of his individuality. It is obvious that certain aspects of the individual having social significance contribute more than others to his personality. The aspect of the personality picture that predominates is always the social aspect – personality is the social self; the role played in social relations; social effectiveness (the extent to which an individual is effective in social situations) is the acid test of one's personality.

Typologies

According to ancient Hindu scriptures (Vedas, Upanishads and Bhagavad Gita) there are three major GUNAS (Qualities) in human beings - Sattva, Rajas and Tamas. Based on dominant - the pre gunas of the individuals they can be classified as three personality types.

The characteristics of Sattva are :- harmony ; light (prakasha or knowledge) ; bliss; supreme peace ; cheerfulness ; emotional balance ; purity of nature ; contentment ; constant devotion to Atman ; absence of pride, hatred, hypocrisy, lust, anger ; desire for liberation ; spiritual dispostion, faith, detachment from the unreal, wisdom, enquiry, meditative inclination.

The attributes of Rajas are :- lust ; anger ; greed ;arrogance ; hatred ; pride, hypocrisy, jealousy and such other negative traits.

The characteristics of Tamas are ;- Ignorance, stupidity, carelessness, lethargy, dullness, perverted intellect.

Human beings are a mixture of the three gunas - in different proportions. Even the sattva type of human beings occasionally exhibit behaviours of Rajas or Tamas Ancient Greeks described personality based on bodily "humours" or fluids - Melancholic (depressed), Sanguine (cheerful), phlegmatic (unemotional) or choleric (irritable).

Sheldon classified people by body type - plump endomorph

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(Sociable, relaxed and even tempered), muscular - mesomorph (bold and physically active), thin - ectomorph (restrained self - conscious and solitary).

Typologies based on "humours" or "body type" have lost their validity today.

Carl Jung"s typology based on social interaction of an individual is popular today, especially in Management Studies. He refers to individuals as introverts or extroverts. The introvert is inwardly reflective, reserved, less talkative and is likely to react negatively to and to withdraw from situations. The extrovert, on the other hand, is likely to react positively to situations, outwardly expressive, talkative and active in making social contacts. Most individuals are neither extreme introverts nor extreme extroverts but somewhere in between - ambiverts. According to one school of thought it is often the situation that makes the individual introvert or extrovert.

The Myers - Briggs Type Indicator classifies people into two types – "thinking" type and "feeling" type. "Thinking" people are supposed to prefer an objective standard of truth and good at analytical skills". "Feeling" people are supposed to be sensitive to values, kind, sympathetic and appreciative. But the scientific worth of the Myers - Briggs Type Indicator (126 questions : e.g. Do you usually value sentiment more than logic, or value logic more than sentiment? - to test the preferences of the subjects) is being questioned by several researchers in the field of Psychology. Further it is again situation that stimulates "thinking" ' (Head oriented) approach or 'feeling" (Heart oriented) approach in individuals, according to some psychologists.
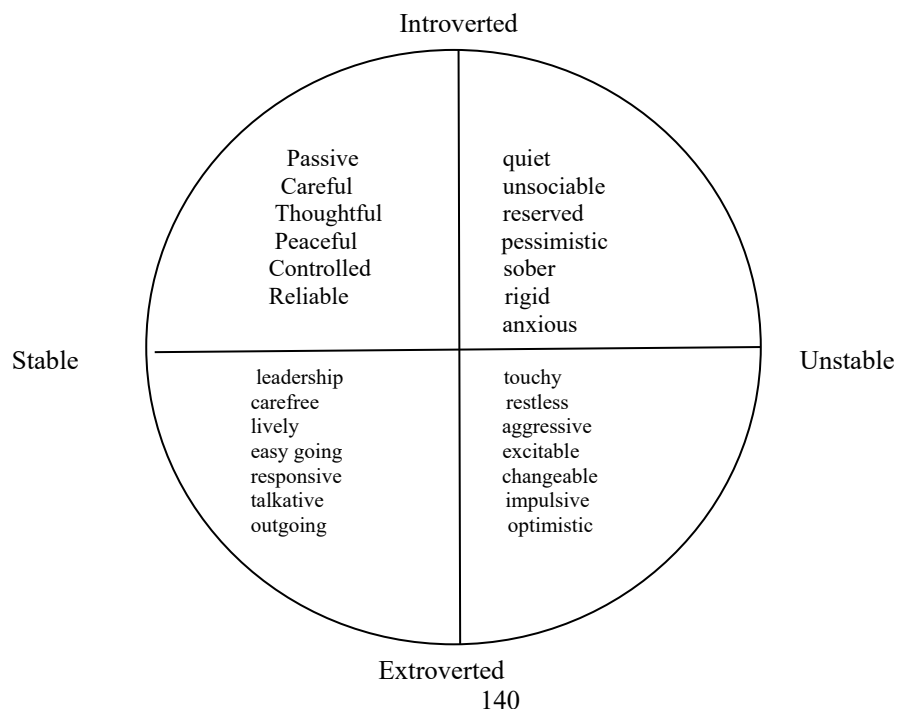
Psychologists attempted to describe personality in terms of basic traits – people's characteristic behaviours and conscious motives - in terms of identifiable behaviour patterns. They were concerned less with explaining individual traits than with describing them. Trait approach is a popular approach to study

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personality of an individual. It goes on the assumption that personality is a summation of traits which can be identified and measured. There are numerous personality traits.

A technique called factor analysis (a statistical procedure) attempts to identify clusters of behaviours which are closely related and label each cluster with an appropriate attribute. Most psychologists who advocated trait approach performed factor analysis to identify clusters of behaviours - Traits of personality.

Eysenk's Dimensions

Eysenk typified people vertically as introverts and extroverts and horizontally as stable and unstable. He identified eight personality traits (attributes/qualifiers) for each quadrant – stable introvert, unstable introvert, stable extrovert, unstable extrovert, as in the following diagram.

Introverted

Passive	quiet
Careful	unsociable
Thoughtful	reserved
Peaceful	pessimistic
Controlled	sober
Reliable	rigid
	anxious

Stable ——————————————— Unstable

leadership	touchy
carefree	restless
lively	aggressive
easy going	excitable
responsive	changeable
talkative	impulsive
outgoing	optimistic

Extroverted

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MMPI

The most extensively researched and extensively used personality inventory is the Minnesota Multiphasic Personality Inventory (MMPI). (A personality inventory is a questionnaire to which subjects respond indicating their feelings, behaviours, reactions which reflect their personality traits). Although MMPI assesses "abnormal" personality tendencies rather than normal personality traits, it has been quite popular among personality researchers. MMPI items were empirically tested. They were able to discriminate between the criterion group (abnormal) and the control group (normal). Hathaway and others structured hundreds of "true – false" statements (e.g. none seems to understand me ; I get all the sympathy I should ; I like Poetry).

Today's MMPI - 2 was renormed on a population cross - section with revised items. The first three scales are "validity" scales which help to determine whether the subject has responded to statements frankly and honestly. The remaining (4 – 13) clinical scales were originally named for categories of psychiatric disorders, but the interpretation now refers to personality attributes rather than diagnostic categories.

MMPI 2

S.No	Scale	Abbreviation	Interpretation of High scores
1	Lie	L	Denial of common Frailties
2	Frequency	F	Invalidity of profile
3	Correction	K	Defensive, evasive
4	Hypochondriasis	H_S	Concern with body Symptoms
5	Depression	D	Pessimism, Hopelessness
6	Hysteria	Hy	Uses symptoms to solve problems
7	Psychopathic	Pd	disregard for social deviancy norms
8	Masculinity-Feminity	Mf	feminine orientation (males) masculine orientation (females)
9	Paranoid	Pa	delusion, suspiciousness
10	Psychasthenia	Pt	anxious,guilt feelings
11	Schizophrenia	Sc	withdrawn,bizarre (Strikingly odd) thoughts
12	Hypomania	Ma	overactive, excited , impulsive
13	Social introversion	Si	Shy, inhibited

Fakability of responses by subjects in order to make good impression is assessed by validity scales (subjects who respond

"false" to statements such as "I get angry sometimes" like responses). Validity scales has 15 content scales assessing, for instance, work attitudes, family problems and anger.

With six or more points on the L scale the test results become less valid.

High scores on the F scale indicate confusion or carelessness - bizarre thinking invalidating the test results.

High scores on the K scale indicate the evasive or defensive response of the subject in his attempt to present himself in a socially desirable manner.

Personality inventories are scored objectively. (objectivity does not, however, guarantee validity). Self - report personality tests are popular in assessing personality traits. But peer reports provide more trust worthy information. Peers who have plenty of opportunities to observe the subjects in day - to - day life situations provide the acid test for assessing the personality traits of the subjects.

Cattell 16 PF

Cattell identified 16 factors of personality. He framed them as bipolar dimensions.

Left	Factor	Right
1. Reserved	A	Outgoing
1. Less Intelligent	B	More Intelligent
2. Affected by feelings	C	Emotionally stable
3. Submissive	D	Dominant
4. Serious	F	Happy go lucky
5. Expedient	G	Conscientious
6. Timid	H	Venturesome
7. Toughminded	I	Sensitive
8. Trusting	L	Suspicious
9. Practical	M	Imaginative
10. Forthright	N	Shrewd

11.	Self-assured	← O →	Apprehensive
12.	Conservative	← Q1 →	Experimenting
14.	Group dependent	← Q2 →	Self-sufficient
15.	Uncontrolled	← Q3 →	Controlled
16.	Relaxed	← Q4 →	Tense

His personality questionnaire (Cattell 16 PFQ) has been the most popular personality inventory throughout the world. (Culture fair and culture free).

EPPS

The Edwards Personal Preference Schedule (EPPS) consists of pairs of forced - choice items each balanced on "Social desirability" or "Social undesirability". The subject must choose one of the two as being more typical or more characteristic of him.

e.g. A.I like to be successful in things undertaken

B.I like to form new friendships.

(Both are socially acceptable / desirable;)

A.I feel depressed when I fail at something

B.I am nervous when talking before a group

(Both are socially undesirable / unacceptable)

The demerit of this method is that it reveals only relative preference for one motive or feeling over another ; it does not indicate the absolute level.

Edwards employed the fifteen needs or Motives of Murray (Harvard Psychological Clinic). Each of the 15 needs is paired with the other fourteen.

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The list of 'Needs' employed in EPPS is as follows:

No.	Need for	Manifest behaviour
1.	Achievement	to accomplish tasks with success
2.	Deference	to comply with social norms and values
3.	Order	to plan effectively and be organized
4.	Exhibition	to be the centre of attraction in a group
5.	Autonomy	to be independant and free from rigid rules and regulations
6.	Affiliation	to have a sense of belongingness
7.	Intraception	to analyse the other's behaviours
8.	Succorance	to receive support and attention from others
9.	Dominance	to assert oneself and influence others
10.	Abasement	to be submissive and humble
11.	Nurturance	to be of assistance to others
12.	Change	to alter ; to make or become different
13.	Endurance	to be persistent on the completion of the tasks

14.	Hetero sexuality	to be associated with and attractive to the members of the opposite sex
15.	Aggression	to express one's opinion violently and be critical of others

The 'Big Five' Personality Factors

Today's trait researchers believe that earlier trait - dimensions may be modified and dubbed the Big Five. (Mc Crae and Costa). They are as follows :

S.No	Trait Dimension	Endpoints of the Dimension (Bipolar)
1	Emotional Stability	Calm–Anxious; Secure– Insecure; Self - satisfied - Self – pitying
2	Extraversion	Sociable – Retiring; loving - Fun – Sober ;Affectionate - Reserved
3	Openness	Imaginative – Practical; preference For variety-Preference for Routine
4	Agreeableness	Soft hearted -–Ruthless; Trusting – Suspicious Helpful - Uncooperative
5	Conscientiousness	Organised – disorganized ,Careful – Careless ; Disciplined - impulsive

Genetic predispositions and other biological factors

influence these traits to some extent.

CPI

The California Psychological inventory (CPI) is another personality test based on the method of empirical construction - based on the significant difference between criterion group and control group on the scale. It uses some of the questions of MMPI but it is designed to measure normal traits of personality. Some of the traits measured by CPI are dominance, sociability, self - acceptance, responsibility. (The Criterion group for dominance consisted of persons rated by their peers as aggressive, assertive, confident and self - reliant. The non - criterion (Control) group for "Low in dominance" consisted of persons rated by their peers as retiring, diffident, inhibited, dependent, submissive).

Segments of Personality

Thorndike and Hagen identified five segments of personality as in the following diagram:

Interest

Attitude

Character

Temperament

Adjustment
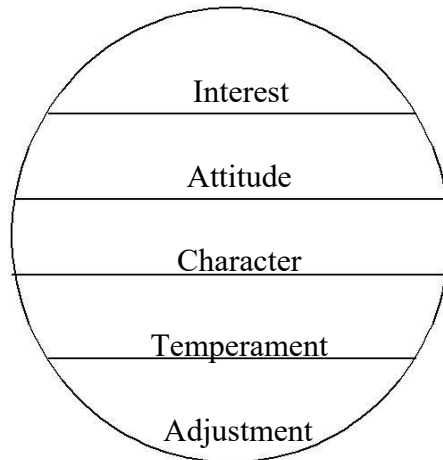
Interest refers to the general tendency of an individual to

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seek out and participate in certain activities.

Attitude refers to one's mind set or mental set.

Character refers to the ethical or moral self of an individual; it is personality viewed from the ethical or moral stand point.

Temperament refers to the characteristic mood of an individual (some of us are usually cheerful; others are often gloomy.)

Adjustment refers to harmony (intra and inter) - within the individual; between the individual and society.

To have an effective personality, one must have positive interests in life, have a positive attitude towards self, others, and life in general, have a sound character, a nice temperament and a high degree of adjustment.There are evaluative instruments to study and interpret, interests exclusively. They are called interest inventories.

There are evaluative instruments to study and interpret attitudes exclusively. They are called attitude scales.

There are no well known standard evaluative instruments to study character since there has been no consensus among educationists, psychologists, sociologists and other researchers on the operational definition of character. Character eludes precise operational definition since the concept of the ingredients of character varies from culture to culture, nation to nation, region to region, even from individual to individual.

The well known standard personality inventories study and interpret either temperament or adjustment or both. Some personality inventories are also called Temperament surveys or Adjustment inventories.

Assessment of Personality

Many situations in everyday life require personality

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assessment. There are three general approaches to personality assessment. One is holistic or overall approach. According to Munn, "personality is not a summation of all measurable traits; it is a merger, a blend, an integration, an organized whole".

Emphasis is placed upon evaluation of the person as a whole. A second approach which also aims at assessing the whole person but which does it less directly with more restricted testing situations than the one mentioned earlier is the projective approach. The third approach, by contrast with the other two, is somewhat piecemeal. It goes upon the assumption that personality is a constellation of traits and that these traits may be measured separately. This is called Trait approach.

Psychology views the individual more analytically. The elements of personality are called personality traits. Personality tests are designed to reveal and measure them. There are numerouspersonality traits – dimensions / factors of personality. Some aspects of personality are evident for instance, friendliness, general vigour, calmness in emergency, sociability and cheerfulness. Such clearly evident aspects of personality are called surface traits. There are also depth factors such as probias, manias, self-negation, irrational desires and aspirations. Assessment of such depth factors (unconscious) has always been a challenge to psychologists.

Methods of Assessment

- Interview

Interview may be either formal or informal or these two may be combined. In the informal interview the adviser tries to get definite information from the subject. In the informal interview the adviser sets aside his list of questions and engages the subject in conversation and gains many insights into the individual's personality. The informal interview is often used to help people with personality problems. In the formal interview the subject is likely to become rigid and may not reveal his true personality. In

the informal interview he feels at home with the interviewer, becomes flexible and thus reveals his true personality.

- Rating Scale

The rating scale is a device for getting systematic judgement of the extent to which an individual possesses certain traits or exhibits certain modes of behaviour. One of the most useful of these devices is the graphic rating scale.

In making graphic ratings, the judge indicates the degree to which, in his opinion, the individual possesses the trait or behaviour by placing a mark at the appropriate point along a line taken to represent the personality trait.

Eg: How are you and others affected by his appearance and manners?

*	*	*	*	*
A	B	C	D	E

A ----→ sought after by others

B ----→ welcomed by others

C ----→ accepted by others

D ----→ tolerated by others

E ----→ avoided by others

The following precautions may be observed in structuring a graphic rating scale:

The behaviour trait to be rated must be clearly defined Eg. Co-operation – consider how well the person workswith his superiors, peers, subordinates. Does he readily assume responsibilities, which may cause him inconvenience? Does he freely offer help?

- The rating points are to be clearly defined (Avoid qualifiers like very good, good, average, below average, poor; instead provide statements which indicate behaviour manifestation for each rating point).

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Eg: Resourcefulness:

    A -----→ He finds a way out of any difficulty

    B ----→ He finds a way out of most difficulties

    C ----→ He seeks others help and solves the problem

    D ----→ He becomes restless when confronted with a problem.

    E ----→ He goes to pieces at the advent of a problem.

This will help the rater to spread his ratings over the whole scale; if raters are not able to define each rating point (the minute distance between one and the other) it will result in bunching error(ratings centre round a few points)

The 'Halo' error (effect) must be guarded against. When the rater evaluates the same person on a number of traits he is likely to rate him high or low on all of them if he regards the ratee as a generally superior or inferior person (mostly depending upon the rating of the first trait). Halos can be diminished by having the judge mark all the ratees on a single trait, then a second and so on. Raters are to be adequately oriented on the purpose of rating and mode of rating. If the rating trait and the rating points are clearly defined and if they are informed that their ratings will be kept confidential and to be used for research/guidance purpose only. 'Halo error' is likely to be eliminated.

The Questionnaire or Behaviour Inventory

The questionnaire presents a list of statements or queries which are to be responded by checking one of the several possible answers. The questionnaire is structured with three objectives. The first is to get systematic information concerning the individual's worries, problems, feelings of inadequacy and the like (These inventories are called personal data sheets or sometimes trouble sheets). Secondly the questionnaire has proved to be valuable as a means of assessing a person's interest in a variety of things/activities – people, books, sports and the like. Thirdly the questionnaire is also used to get information regarding attitudes

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towards and beliefs about social, economic, political and religious matters.

There are two approaches which personality inventory can take. In the direct form, specific information is called for and noeffort is made to conceal the meanings of the questions. The subject may see through the questions and hence may answer in the conventional way (real response will be substituted by the so called right response). Hence in order to conceal the real purpose the questionnaire may take the indirect or disguised approach. Here is an illustration. Suppose you are structuring statements on the study habits of college students. A direct statement runs thus: I dilly-dally and waste time before getting down to my study: Always / Often / Sometimes / Rarely / Never. An indirect statement will be like this: The college student dilly-dallies and wastes time before he gets down to study: Always / Often / Sometimes / Rarely / Never.

The subject is likely to identify himself in 'The college student' and reveal his true response.

Performance and Situational Tests

Psychologists set up situations in which an individual can act out and thus exhibit personality traits or characteristics. The puppet show and various dramatic situations have been employed in studies of children who present behaviour problems or personality difficulties. These performance tests allow children who control the puppets to reveal unconsciously their wishes and drives which often they cannot and will not reveal in public. Role play or socio drama may also be employed as a situational test. In Role play a situation is outlined elaborately and roles are allotted to individuals. No prescribed dialogue is given. The dialogue each individual prepares and presents for his role will be an emotional release of his wishes and drives. Thus the psychologist will understand the depth factors of the personality of the individual which disturb him and make him a problem person.

Projective Techniques

The purpose is to get the subject reveal motives, and personality characteristics without knowing that he is doing so. To accomplish this purpose, the person is presented with a vague unidentified task and is asked to say something about it. The basic idea of such a method is that when a subject hardly knows what he is supposed to do but must do something he projects his own personality into his performance. The great advantage of this method is that the subject does not know what is being tested or what interpretations the psychologists can make out of his results. There are now several projective tests but the Rorschach inkblot and Thematic appreciation test (TAT) were the two that are most widely known and used.

Rorschach Inkblot Test

It is named after Hermann Rorschach, a Swiss Psychiatrist. It consists of ten inkblots. The cards are presented to the subject, one at a time with a question, 'what does this remind you of?' After a subject gives his responses to all cards, he is then asked to go through them again and describe his responses in detail. 5 out of 10 cards are black and grey; 2 black and the remaining 3 entirely in colours. All the responses of the subjects are scored in three main aspects:

Location: Whether the subject uses some particular part or whole blot in making responses.

Determinant: Whether the shading, colour, form of movement of the blot suggests the response.

Content: Whether the subject sees animals, human beings, or various other objects in making responses.

A large number of 'whole' responses may indicate abstract theoretical traits whereas a large number of 'part' responses may indicate a compulsive person occupied with trivialities. If movement responses predominate, the subject is thought to have

introvertive inclinations, but if colour responses are numerous, the person is regarded as having warm, free, emotional characteristics.

Administration and interpretation of Rorschach inkblot tests require a fully trained psychologist. Further if the method of interpretation is known to the subjects, then they are likely to conceal their real responses and thus they will not reveal their real personality characteristics. If these precautions are taken care of then Rorschach inkblot tests can yield valuable results in identifying 'depth factors' of the personality of an individual.

TAT (Thematic Appreciation Test)

Credit for structuring TAT goes to Murray. TAT consists of a series of pictures (20). They are ambiguous enough to permit a variety of interpretation by the subjects projecting their motives, feelings, modes of adjustment. When presented with a picture the subject is asked to make a story based upon the picture. When the subject makes up a story, he identifies himself with one of the characters in the picture and these stories become disguised biographies. In this way the subject reveals his feelings and desires that he would otherwise hesitate to discuss openly or in some cases would be unwilling to admit. It is interpreted by noting the recurring themes in the stories, the feelings, emotions, attitudes, values and interests of the main character, his relaltionship with others and the overall emotional tone of the story – optimistic or pessimistic or cynical or humorous and the like.

Inkblot tests reveal the structure or organization of an individual's personality. TAT is devised to bring out primarily the content of one's personality.

Word Association Test (WAT)

The test consists of presenting a stimulus word to the subject and asking him to give out a response word as quickly as possible with the first word that comes to his mind. By such

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spontaneous responses the complexes or areas of emotional conflicts are uncovered. The interpretation is based on two factors – response and reaction time. Inability to make a response or mere repetition of the stimulus word is also significant in understanding emotional blockings.

Sentence Competition Tests (SCT)

The subject is required to complete an incomplete sentence the way he feels like.

>   Eg: I feel happy when ....
>   The best aspect of my job is ....

Verbal Projection Test (VPT)

Another test which attempts to combine the principles of TAT and SCT is VPT. In this test verbal items of themes that could make a story are given and the subject is required to construct a story as in TAT. To make the stimulus unstructured the items will not be any way complete.

(e.g) Father and mother facing each other; son anxiously looking at them. The items here are more unstructured than in TAT and hence there is more scope for the individual to project his inner personality traits.
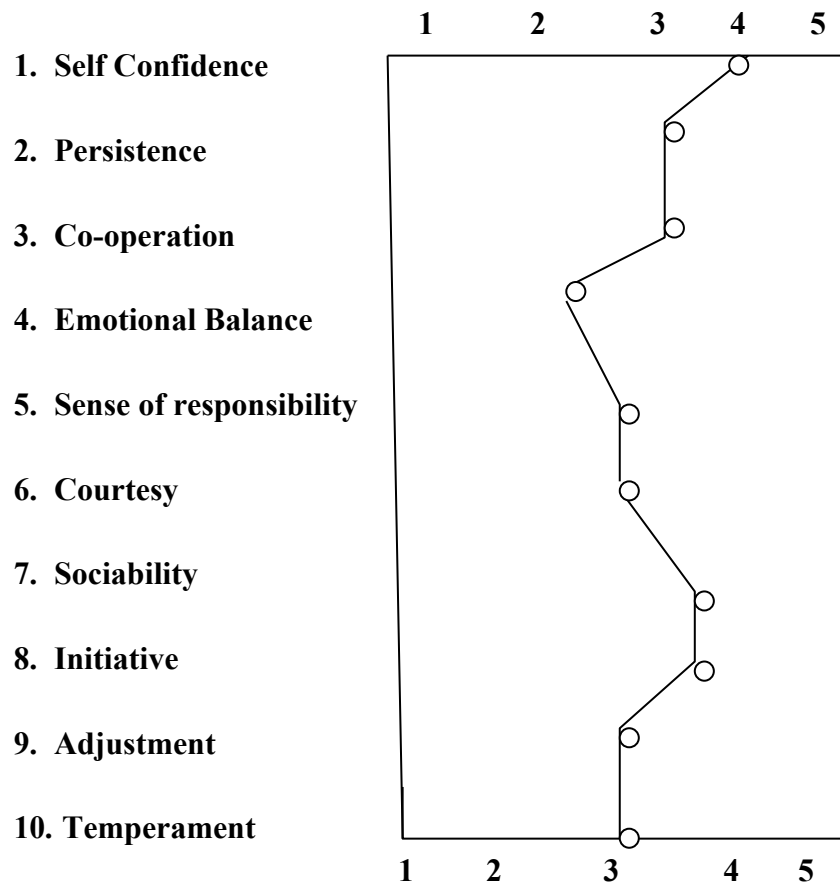
Personality Profile

Psychologists sometimes attempt to represent personality integration graphically by means of a chart or a profile. It is a picture of the personality organization of an individual. It is the pattern of behaviour traits that counts, not the specific, independent behaviours. A profile taken alone does not clearly show the extent to which personality traits are related. At the same time the profile does provide useful information regarding the strengths (plus points) and weaknesses (minus points) of an individual's personality. When two or more reference groups are compared the average standing of each group in each trait will be used for drawing profiles in the same graph sheet to have an easy

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visual comparison.

A personality inventory (self – appraisal) is administered and the individual is assessed in each of the traits. The score in each trait is plotted in a graph sheet. The plotted points are joined by means of line segments. (a zig zig line) . The intra difference, of an individual as well the inter difference between two groups (boys and girls ' Gender differences) may be studied for comparison or contrast.

A personality profile

1. **Self Confidence**

2. **Persistence**

3. **Co-operation**

4. **Emotional Balance**

5. **Sense of responsibility**

6. **Courtesy**

7. **Sociability**

8. **Initiative**

9. **Adjustment**

10. **Temperament**

The Social - Cognitive Perspective

A modern personality perspective - the social - cognitive perspective - proposed by Bandura emphasizes the interaction of persons and their situations. We learn most of behaviours either through conditioning or by observing others and modelling our behaviours. According to Bandura, "Behaviour, Internal Personal factors and Environmental influences all operate as interlocking determinants of each other" (reciprocal determinism). Behaviour emerges from the interplay of external and internal influences. Our behaviour is influenced by our genes, our experiences and our personalities.

Social - cognitive psychologists emphasize our sense of personal control - our sense of controlling our environment rather than feeling helpless. External locus of control refers to the perception that chance or outside force beyond one's personal control determines one's fate. Internal locus of control refers to the perception that one controls one's own fate. Research studies reveal that internals are more successful than externals. Self - control of internals - the ability to control impulses and delay gratification - in turn predicts good adjustment and social success. The social cognitive perspective is the modern approach to person situation controversy on Personality.

Some of the person variables that influence behaviour, in interaction with environment conditions, are :

- Competencies (intellectual abilities, social skills, physical skills and other special abilites)
- Cognitive strategies (habitual ways of selectively attending to information and organising it into meaningful categories)
- Expectancies - (expectations about consequences of different behaviours)
- Subjective - outcome values - (the values one places on the

expected out comes)

- Self - regulatory systems and plans - (self - imposed standards and rules)

Social learning theory

Social learning theory focusses not on internal drives, but on patterns of behaviours the individual learns in coping with environment. The emphasis is on the reciprocal interaction between behaviour and environment. We are neither driven by internal forces nor are we passive reactors to external stimulation. The type of behaviour one exhibits partly determines the reward (social approval) or punishment (social disapproval) we receive and these influence our behaviour.

Social learning theory stresses the importance of cognitive processes (thinking and reasoning), vicarious learning (learning by observation) and self - regulatory processes. A specific behaviour produces an external outcome and also self - evaluative reaction. Reinforcement has two sources : external and self - evaluative. Sometimes they coincide and sometimes they are contradictory.

Individuals are not simply passive reactors to situational conditions; our behaviour influences the situations of life as well as it is being influenced by them; the relationship is reciprocal. Trait theory and social learning theory are not contradictory but complementary.

Integration of Personality

Integration of personality is a harmonious balance between the individual's desires and aspirations on the one hand and his potentials on the other (one must desire what one deserves). The marks of an integrated personality are balance and adjustment to environment. Balance refers to interharmony. Another way of looking at integration of personality will be to find whether there is optimum development in each of the three domains of human behaviour – cognition, psychomotor and affection of an individual. The development of one and utter neglect of other domains will

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result in disintegration of personality; there should be uniform and optimum development in each of the three domains.

School influences the development of personality of the child to a large extent through peer group influences, curriculum, system of examination and the teacher's personality. Home climate, peer group climate, classroom climate, school climate and social climate, in general, exert powerful influences (directly or indirectly) to help an individual achieve an integrated personality. Integration of personality leads to success in life.

Trait theories assume that personality is consistent so that a person can be characterized to enduring traits. Social learning theory regards the situations as an important determinant of behaviour. A person's actions in a given situation depend upon the specific characteristics of the situation, and past reinforcement for behaviour in similar situation.

Individuals are not simply passive reactors to situational conditions; our behaviour influences the situations of life as well as it is being influenced by them; the relationship is reciprocal. Trait theory and social learning theory are not contradictory but complementary.

Questions:

1. What is meant by personality? Elaborate Allport's definition of personality. (in about 75 words).

2. Attempt a critical estimate of typologies of personality (in about 300 words)

3. How did Jung typify personality in terms of social interaction? (in about 150 words).

4. Attempt a critical estimate of MMPI (in about 300 words).

5. Briefly explain diagrammatically Eysenk's dimensions of personality. (in about 150 words).

6. Attempt a critical estimate of EPPS (in about 300 words).

7. Write short notes (in about 150 words each) on the following
   a) The Big Five
   b) CPI
8. How did Cattell define factors of personality by bipolar attributes (in about 150 words).
9. What are the five major segments of personality as identified by Thorndike and Hagen. Briefly explain each segment (in about 300 words).
10. Distinguish between Trait approach and Holistic approach to personality assessment. (in about 150 words)
11. Write short notes on the following (in about 150 words each).

   Interview
   Rating scale
   Behaviour inventory
   Situational tests
   Personality profile
12. What do you mean by projective techniques of assessing personality?
13. Identify the different projective techniques of personality assessment. Explain their modes of operation. Attempt a critical estimate of each method (in about 500 words).
14. What is meant by integration of personality? (in about 150 words).
15. What is meant by social-cognitive perspective of personality? (in about 300 words)
16 'Trait theory and social learning theory are not contradictory but complementary' Discuss.

Ps.

     The ultimate objective of Education is Harmonious Development of Personality of the individual – through Formal, Non – Formal and informal interactions. Personality Development is gradual and incidental. A positive personality is an asset. It leads one to success and Happiness. In addition to teaching their respective academic disciplines resourceful teachers employ techniques of developing in their students positive personality traits through their formal and informal interactions striking anecdotes in the lives of scholars, scientists High achievers and social leaders are likely to develop basic human values and positive personality traits in students.

CHAPTER 24
INTERESTS, VALUES AND ATTITUDES

Content outline: Interests – Inventories – Kuder, Strong – values – norms – Allport – Vernon's values – Attitudes – opinions – Prejudice – Development of Attitudes – Role of Home, School, Society – Attitude scales – Thurstone's scaled values – Likert's summated ratings – Dispositions and sentiments – Sentiment of self-esteem – Image.

Interests

Interests are tendencies of the individual to seek out and participate in certain activities. Interest operates at two levels. At the first level it is only expressed or potential. At the second level it is manifest or functional. An individual's aptitudes and abilities are not so highly specific that he can be given guidance solely on the basis of aptitude and general mental ability. Motivation, influenced by one's interests, values and preferences – in addition to aptitude and abilities can determine the selection of a course of study or an occupation.

Evaluative instruments employed to study and interpret interests are called interest inventories.

The KUDER inventories: These are designed for the use from grade 9 onwards and with adults in the form of preference records (KPR). Three preferences are indicated: vocational, occupational, personal.

- Vocational: Outdoor, mechanical, computational, scientific, persuasive, artistic, literacy, musical, social service and clerical.
- Occupational: farmer, newspaper editor, physician, minister, mechanical engineer, consulting psychologist,architect, retail clotheir.

- Personal: five broad characteristics of behaviour regarded as significant for certain types or groups of vocations are studied through a personality inventory – being active in groups, familiar and stable in situations, working with ideas, avoiding conflict, directing others.

The items in the three preference records are of forced choice variety. Each item consists of three statements from which the subject selects one he likes most and the one he likes least.

Example:

Collect Autograph	Exercise in a gymnasium
Collect Coins	Go fishing
Collect Butterflies	Play Baseball

The Strong Inventories

The strong vocational interest blank (SVIB) is available in separate forms for men and women from age 17 onwards. Each inventory contains 400 items dealing with likes and dislikes in occupations, school subjects, amusements, activities, personality traits; with order of preference of activities, importance of factors affecting one's work, positions one would like most and least to hold in an organization.

The purpose of the inventory is to find the extent to which an individual's interests and preferences agree with those of successful persons in specified occupations. This is called criterion keying.

SCII (Strong Campbell Interest Inventory) was a later revision of SVIB.

There have been several revisions of KPR and SVIB. These two inventories have been the major frames of reference for researchers in „Interests‟ who improved, modified, refined and revised them. Departments of Education and Psychology in Indian

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Universities have been employing KPR, SVIB, SCII and their revisions for their research projects (with suitable modifications for Indian social and cultural conditions).

Values

Values refer to abstract or covert societal definitions of what is wanted, what is best and what is desirable. Values have a goal orienting factor. Values refer to the criteria in terms of which choices are made between alternative courses of action. Values imply a ranking of ideal choices to be made in order to attain the goals.

Norms refer to overt societal definition of behaviours that one should do, ought to do, and is expected to do under given circumstances. Norms identify the overt behaviour models that society or societal groups accept as appropriate means for achieving some identifiable end (goal or value).

The major objective of schooling is to socialise the child. An individual will be considered to be socialized only when he absorbs the social values and norms. Basic human values are to be cultivated in the child as deliberate as well as concomitant learning. Mere academic achievement is not adequate. Unless the child learns to cherish and practise values it will not be a success in society. Social heritage and cultural heritage imply that the student population imbibes the values and norms of the society. The current trend, 'value education' (education of the 'Heart') is an attempt in this direction.

Allport – Vernon Values

Allport and Vernon identified six fundamental life areas of interest indicating six major types of values of life: Theoretical, Economic, Aesthetic, Social, Political, Religious.

Theoretical value refers to interest in determining truths, intellectual pursuits, academic pursuits, research (philosopher, scientist. Scholar).

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- Economic value refers to interest in what is useful, down to earth, practical or pragmatic.
    - Aesthetic value refers to interest in finer aspects of life – music, art, painting, writing and the like.
    - Social value refers to interest in people, love of people, serving the suffering humanity, championing the causes of the downtrodden, exploited.
    - Political value refers to interest in exercising power over others; bossing others, controlling others, managing others.
    - Religious value refers to interest in the comprehension of human life in the light of religious, ethical or moral implications.

Psychologists have been employing Allport-Vernon typology to indicate interest areas, value types or even personality types. Profiles are also drawn for easy visual comparison of one's standing in one area with one's in other areas.

Attitudes

Attitude is an inner-state rather than an overt expression. It is basically a tendency to act. It is mental set or readiness to act. It is an implicit response towards or away from an individual value or social value. It is rated usually on a five point scale (very favourable, favourable, indifferent (neutral), unfavourable, strongly unfavourable).

Attitudes cannot be studied directly. In attitude scales we normally elicit opinions. Opinion is the verbal expression of an attitude. Attitudes have deep seated roots, are integral aspects of the personality and are both causes and effects of behaviour. Attitudes have both feeling and ideational content and tend to cause behaviour with those feelings and thoughts. A prejudice is an attitude (generally one of opposition) that is not supported by sound evidence. An opinion is an estimate or point of view based on knowledge.

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Attitudes develop in a number of ways:
- from the attitudes expressed in the home, school, peer group and other places.
- From the ideas, facts and attitudes expressed in books, journals, magazines, radio, TV and movies.
- From the experience in terms of how pleasant or unpleasant they are.
- From a person's status in relation to others; his personal relativity.
- From self or ego-involvement.

The school has the responsibility of developing in the students good (positive and favourable) attitude towards others, towards self, towards learning, and in general towards desirable values. Attitude towards school subjects is developed largely by success or failure in those subjects. Attitude of the student towards his parents, teachers influence the forming of attitudes towards school subjects.

The effects of education on attitudes of any given person are difficult to predict. The reasons for this are found in the teacher, the learner himself and the many facets of the environment that influence the learner.

Education seems to have the effect of developing mature attitudes and of reducing prejudice.

The teacher probably has the best influence on the attitude development of his students; if he is personally likeable and professionally competent, and if he observes problem-solving procedures and helps the students seek out evidence. Understanding the attitudes of the student helps the teacher understand their behaviour.

The teacher who maintains discipline in the modern sense

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keeps his students busy with their learning activities and thereby prevents disorder and wastage of time and energy. However discipline in this sense usually will not be of much help to those relatively few students who have deep seated personality problems. Positive, efficient teaching is the best defence. Good teachers tend to be generous with their appreciation and praise, like

their students, are liked by them and have intellectual interests.

Effective teachers bring about discipline in a democratic and co-operative atmosphere and help their students in learning to initiate and sustain desirable individual and group behaviour.

The attitude of the teacher – positive or negative, sceptical or cynical, optimistic or pessimistic will influence the students directly or indirectly.

Attitude Scale

The information form that attempts to measure the attitude or belief of an individual is known as an attitude scale or opinionnaire. Opinion and attitude are not synonymous. How an individual feels or what he believes is his attitude. But it is difficultto describe and measure attitude. The investigator must depend upon what the individual says as his belief and feelings. This is the area of opinion. (Opinion is the verbal expression of an attitude.) Through the use of questions, or by getting an individual express reaction to statements, a sample of his opinion is obtained. From this statement of opinion may be inferred or estimated his attitude

– what he really believes.

The process of inferring attitude from expressed opinion has many limitations:

- An individual may conceal his real attitude and express socially acceptable opinion.
- An individual may not really know how he feels about a social issue; he may never have given a serious consideration.

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- An individual may not be able to know his attitude about a situation in the abstract.
- Until confronted with a real situation he may be unable to predict his reaction or behaviour.

Even behaviour itself is not always true indication of attitude. Often we exhibit socially approved behaviour though our attitude is against it. Social custom or the desire for social approval make many overt expressions of behaviour mere formalities, quite unrelated to the inward feelings of the individual.

Methods

- Asking individual directly how he feels about the subject – a schedule or questionnaire of the open or closed form – interview.
- Asking the individual to check the statement in a list with which he is in agreement.
- Asking the individual to indicate his degree of agreement or disagreement with a series of statements.
- Inferring his attitude from his reaction to projective devices, through which he may reveal his attitude unconsciously.

Thurstone's Technique of Scaled Values

Twenty or more statements are collected on a specific subject towards which attitude is to be studied. Statements are scrutinised so that each of them consists of a single thought or idea. These statements are placed before a panel of judges/experts. They classify these statements into 11 groups ranging from one extreme (most favourable) to the other extreme (most unfavourable). Items where there is marked disagreement are discarded. Items that are retained are given median scale value between 11 and 1 (or between +5 and -5) as established by the level.

The list is placed before the subjects and they are asked to place a tick mark against statements with which they agree. The

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median values of these statements are added and the aggregate indicates one's score in the attitude scale. Higher the score, more positive the attitude.

Likert's Method of Summated Ratings

A large number of statements expressing opinion held by a substantial number of people are collected and scrutinised. They are restructured in a such a way that each statement expresses a single thought or idea. There will be around 20 statements (not less than 20 statements). There will be equal number of positive and negative statements. These statements (all of these) are to be reacted on a five point scale SA (strongly agree), A (agree), UD/UC (undecided/uncertain), DA (Disagree),SDA (strongly disagree). Instead of 'agree', 'approve', may also be used. Method of scoring will be as follows:

	Positive Statements	Negative Statements
SA	5 (+2)	1(-2)
A	4 (+1)	2(-1)
UD/UC	3 (0)	3(0)
DA	2 (-1)	4(+1)
SDA	1 (-2)	5(+2)

Now-a-days scoring in negative numbers is avoided. If the opinionnaire consists of 30 statements, the following score values will be revealing.

Most favourable response	30 x 5	150 (perfect score)
Favourable response	30 x 4	120
Neutral response	30 x 3	90
Unfavourable response	30 x 2	60
		30 (least possible
Most unfavourable response	30 x 1	score)

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Thus one's attitude can be quantified and thus used
In research by employing appropriate statistical techniques.

Dispositions and Sentiments

When attitudes are mild and operate with a lower potency, they are a called dispositions (positively disposed, neutrally disposed or negatively disposed). In such a state attitudes are mild, passive (not active or vigorous). When attitudes are given an emotional colouring they become sentiments. Sentiments are complex. They differ from physical needs; they emerge in social interaction; they are learned, not innate. Unlike attitudes which are subject to change, sentiments are powerful foci of concern for the individual and may last for a lifetime. Sentiments, being emotionally coloured, cannot be changed by reasoning in most cases. Superstitions are sentimental extensions of certain beliefs. Positive productive sentiments may be encouraged and developed (e.g. patriotism) negative, unproductive sentiments must be discouraged and disapproved (eg. Religious fanaticism).

Sentiment of Self-esteem

The integrating sentiment in all normal people is the sentiment of self-regard or self esteem. This sentiment gives rise to the manner in which an individual responds to the image* held of him by others. Self-esteem is present in the personality make up of every individual.

A sentiment extends beyond itself to include all those values important to the individual – family, nation, profession, friends. Whatever the person values as being part of himself will be loved, protected, and defended for in these attitudes the person is, in fact, defending himself.

* Abraham Cooley on "Image":;
" I am not what I think I am;
I am not what you think I am;
I am what I think you think I am"

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Questions:

1. What is meant by interest? What are its two phases of operation? (in about 75 words).
2. What is meant by interest inventory? (in about 75 words).
3. What do Kuder inventories and Strong inventories attempt to study? In what way are they different from each other? When are they employed? (in about 300 words)
4. Distinguish between values and norms. (in about 150 words).
5. Identify and briefly explain the six fundamental values of Allport and Vernon (in about 150 words).
6. What is meant by Attitude? In what way is it related to opinion (in about 75 words)
7. What is meant by prejudice? (in about 75 words).
8. Outline the relative influence of Home, School and Society in the development of attitudes. (in about 300 words).
9. What is meant by attitude scale? What are its limitations? (in about 150 words).
10. Outline the sequential phases of structuring an attitude scale employing Thurstone's method of scaled values. (in about 300 words).
11. Outline the sequential phases of structuring an attitude scale employing Likert's method of summated ratings.(in about 300 words)
12. Write short notes on the following. (in about 75 words)

   a) Disposition b) Sentiment
   c) Self-regard d) Image

CHAPTER 25
MENTAL HEALTH

Content outline: Mental Health – Meaning and Definition – Indicators – Mental hygiene – Factors which affect mental health – Stress, Frustration, conflict – Problem solving attitude – Coping and defensive behaviour – Defence mechanisms – Educational implications – Towards sound mental health.

A more appropriate term for this concept is 'Emotional Health' since 'mental' refers to 'intellectual' (intelligence is known as the general mental ability). Mental health refers to personal happiness and satisfaction with one's work and achievement. Major indicators of mental health are emotional balance, intrinsic motivation, adjustment, sense of humour, healthy interpersonal relations and a life mission.

Mental health is a process of living that points to better living. It is not passive acceptance of life and its conditions; it is not just efficiency or contentment, or complacent abiding by rules. It means an even temper, functional intelligence and consideration of the social order. Reality is accepted. Problems are solved when solvable and lived with when unsolved or unsolvable. Mental health, like physical health, is a matter of degree.

A person in sound mental health, is relatively free from symptoms of maladjustment. Mental health is preserved in a friendly and sympathetic atmosphere, by not being overprotected, by developing efficiency through good habits and by having a well balanced programme of work and rest; mental health is the complete harmonious functioning of one's personality.

Mental Hygiene

Mental health does not only mean the absence of indicators of mental ill-health but the absence of proneness to them as well. Mental hygiene is the science of dealing with the preservation of mental health; it has a two fold function – prevention and cure.

Mental hygiene stresses good living conditions that will not only cure mental ill- health but prevent the onset of mental illness; it is a science which deals with human welfare and pervades all fields of human relationships. It is the art of living according to the sound principles of psychology and philosophy. The objective of mental hygiene is to help people in the realization of a fuller, happier, more harmonious and more effective life.

Factors which affect Mental Health

Factors which affect mental health or which cause mental illhealth are stress, frustration and conflict.

Stress

Stress refers to a situation when the person is being attacked by several problems simultaneously.
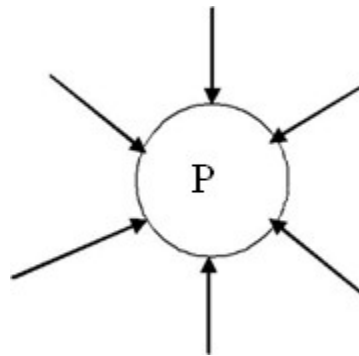
P is the person and arrows directed towards him are the problems. These problems may be real or imaginary. The individual must identify his real problems and must start attacking them one by one in order to priority – in order of intensity.

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Frustration

When the attempt of an individual to reach a goal is blocked he is frustrated.
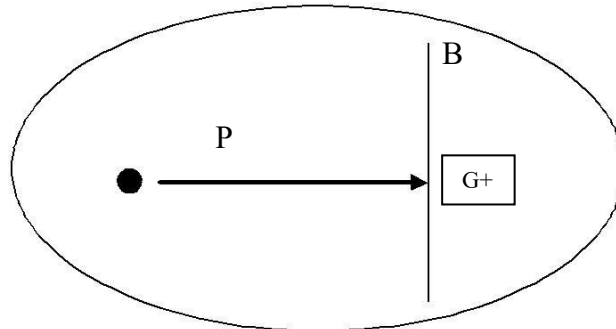
The ellipse indicates the psychological field of a person where several psychological forces operate. The dot P refers to the individual. G refers to a goal. '+' implies attraction and '_ ' implies repulsion. Since the goal attracts the individual moves towards the goal (the arrow indicates his movement). The individual may reach his goal if there are no barriers. The individual may not reach his goal if there is a barrier (line segment B) or if there are barriers.

In a frustrating situation, there are three possible modes of behaviour – surmounting the barrier, circumventing the barrier, goal substitution.

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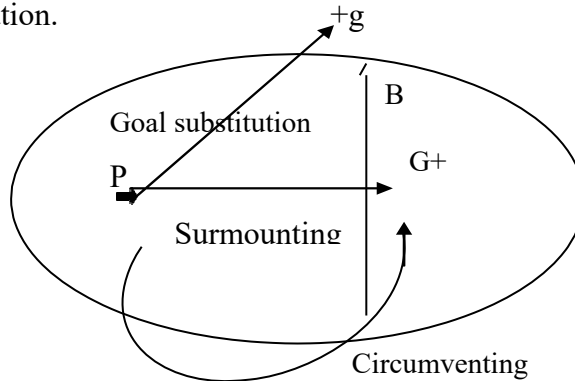
Surmounting the barrier implies piercing through the barrier and reaching the goal. Instead of 'going to pieces' (emotional breakdown) the individual makes the barrier go to pieces and reaches the goal. This is a fair play. Some individuals avoid the barrier take a roundabout route and reach their goals. This is what is called circumventing the barrier. This is not a fair play; it is a foul play (also called backdoor entry). If the goal is beyond one's reach (if one is not competent enough to reach the goal) one can substitute this goal by another one which he can reach without a barrier. This is called goal substitution. To avoid frustration choose reachable goals.

The sources of frustration are environmental obstacles that prevent the attainment of goal or personal inadequacies or handicaps that make the goal unattainable or both.

The ability to stand to any frustration is called frustration tolerance.

Conflict

Conflict refers to a situation when there is a clash between two motives. Conflicts assume serious proportions only when strong motives are involved. There are three types of conflict: Approach – Approach conflict, Avoidance – Avoidance conflict, Approach – avoidance conflict.

Approach – Approach conflict refers to a situation where the individual is flanked by two equally attractive goals/stimuli. The individual feels like approaching both but he cannot approach both; he can approach only one and that is the problem. What isrequired is a quick decision before it is too late. The legendary ass, flanked by two equally enticing and equidistant bales of hay, was said to have starved to death because it was not in a position to take a decision.

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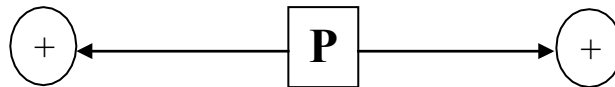
Avoidance – Avoidance conflict is the exact opposite of the previous type. The individual is caught between two negative goals / situations / motives. He wants to avoid both; but he cannot avoid both; he can avoid only one and that is the problem. – 'between the devil and the deep blue sea'. Two modes of behaviour are likely; one is vacillation; another is an attempt to leave the field. Escape from the field does not solve the problem; does not resolve the conflict; it is likely to aggravate it.
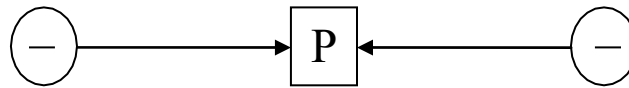
Approach – Avoidance conflict: An individual is simultaneously attracted and repelled by a single goal. The goal has plus points which attract him and minus points which repel him. He must take a decision whether to approach or to avoid (Hamlet's 'To be or not be').
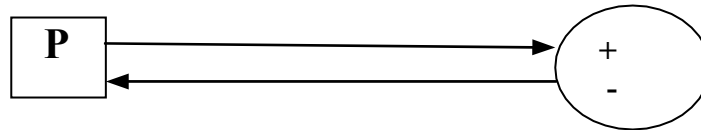
Multiple Approach – Avoidance Conflicts
Often we are confronted with several possibilities for action – each having desirable and undesirable aspects.

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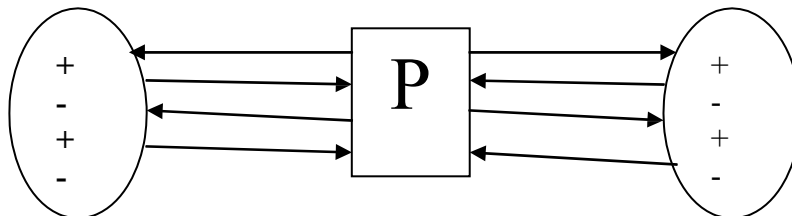
Problem Solving Attitude

Whether it is stress, frustration on conflict, the individual must develop a problem solving attitude. The best way to stop worrying about a problem is to solve it.

- identify and define the problem (Try to specify or pin point the problem; find out where exactly the shoe pinches).

- Analyse the problem (what are the causes of the problem? How to deal with them? What are the different solutions? Which solution is the most feasible one, right now?)

Make a deliberate attempt to solve the problem. If you are not able to solve the problem, seek others' help (others – your well wishers; resourceful people) and solve the problem. If the problem remains unsolved even after your best efforts and the best efforts of your wellwishers try to learn how to pull on with the problem as an unsolved one. This type of behaviour is what is called coping behaviour or coping strategy (Taking the bull by the horns). There is also another type of behaviour – the exact opposite of coping. In this type of behaviour, the individuals, when not in a position to solve problems, do not make any serious attempt nor do they try their best, nor do they seek others' help since they feel it is infradig (below their dignity) to admit their inability to solve problems and seek others' help. Such individuals exhibit a behaviour called defensive behaviour or defensive strategy. Defensive behaviour is manifest in indirect reactions called 'ego-defences' or defence mechanisms. These modes of behaviour are also called mental mechanisms, mental dynamisms, adjustment mechanisms or escape mechanisms. Defence mechanisms are indirect reactions of the individuals who cannot solve problems. Defence mechanisms are unconscious and self-deceptive.

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Defence Mechanisms

. Some major defence mechanisms are outlined here:

Daydreaming or Fantasy

Human beings gradually start building an imaginary dream world as opposed to the real world. Whenever the individual is a failure or does not achieve a goal in the real world he spontaneously (unconsciously) goes to his dream world and achieves success by reaching his goal. Occasional excursion to the dream world does not do any harm to our mental health. One can fly to his dream world once in a blue moon and warm oneself in some pleasant fantasy; but one should come back to the real world. If an individual overstays in the dream world (a habitual retreat) he becomes a misfit in the real world.

Compensation:

In compensation, deficiency in one field is compensated in another. Here is a boy who is weak in English. He struggles to get even the minimum required for a pass; fortunately he has mathematical aptitude to a high degree. He works with a vengeance and scores centum or near centum in Mathematics. It is a case of positive compensation. Though he has compensated, his low achievement in English remains It is not a problem solving technique. It is only a face saving technique. A boy who is weak academically will try to compensate by taking to sports and games if he has athletic aptitude. This is also a case of positive compensation. There are also cases of negative compensation. Some of us are haughty, arrogant, assuming, inaccessible, unapproachable. They maintain distance with others. Such people are usually half baked, less efficient, inadequate. Competent people are usually unassuming people. Great scholars, Scientists, High achievers , Social leaders are usually unassuming. Incompetent people, by putting on airs, try to cover their inefficiency. This is unconscious and self deceptive. There are also cases of overcompensation. People work hard with industry and diligence and turn their deficiency into proficiency. Demosthenes, (a famous orator), Caesar, Helen Keller, Hitler, Napolean were outstanding examples.

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Rationalization:

It refers to a behaviour of giving feasible false excuses for not performing an activity. This is unconscious and is different from lying which is conscious. When you tell a lie you do not believe in what you say (since you know it is a lie). When you rationalise you believe in what you say. It is very difficult to convince you that you are lying. A gifted student gets a low score in a monthly test since he has not prepared for it adequately or he has been absent for the class for a long time. He does not admit the real cause but says that the teacher is partial, does not like him and has deliberately reduced his marks. He believes in what he says. He rationalizes. There are two types of distortion in rationalization-sourgrapism and sweet lemonism. A brilliant unemployed post- graduate applies for jobs. He also appears for IAS examination. He is not selected. Now he says, 'IAS post is not a good one, always under pressure, and IAS officers are not happy. It is good I am not selected" it is case of sourgrapism. He gets a job in a college as a teacher. Now he says, 'of all the jobs college teachership is the best one'. It is case of sweet-lemonism. An utterance of sour grapism is usually followed by one of sweet lemonism.

Identification:

Individuals who are not high achievers identify themselves with high achievers known to them. This is the process of enhancing one's feeling of personal worth. This process starts early in life-right from childhood. Low achievers and Mediocre achievers unconsciously identify themselves with high achievers in the field, try to make friends with them, try to be in their company, and see that their association with high achievers is noticed by others. They bask in others' glory; it is a kind of compensation.

Projection:

In projection the individual tries to attribute his own motives to others. A is angry with B; when A meets B he (A) asks him (B), 'why are angry with me?". Individuals also attribute their hostile motives to others. It is a defensive behaviour when all the negative motives of one are attributed to others.

Displacement:

When an individual cannot openly show negative reactions to one he displaces them to others who are submissive, obedient and helpless. An officer shouts at his subordinate in a fit of rage. The poor subordinate cannot shout back by way of retaliation. When he goes home he shouts at his wife without any valid reason. His wife shouts at her children and the children break their toys in a fit of anger.

Regression:

Going back to earlier stages of behaviour is regression. Some frustrated individuals resort to behaviour that are immature. Crying, weeping, making faces, creating a scene, tempertantrums and such other infantile behaviours after certain age indicate regressive behaviour. Individuals who exhibit such a behaviour operate in the 'child ego state' (Eric Berne).

Repression:

Suppression is conscious; repression is unconscious. Repression is a basic unconscious activity in Freudean theory of personality. It is the attempt of the individual to push into the unconscious mind those experiences and thoughts that are in conflict with social norms of behaviour (ethical code of conduct). Such repressed wishes and thoughts surface occasionally and disturb the mental health of the individuals; they are the root causes of dreams. Dream analysis is one way of identifying and dealing with such repressed wishes and thoughts.

Negativism:

The individual resents strongly to the suggestions of others - almost all suggestions without weighing their merits and limitations. Some individuals react negatively to all social or individual stimuli almost unconsciously. This is partly a compensatory behaviour to gain self importance, to draw others' attention and to boost their self-image.

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Conversion:

The psychological maladjustment is unconsciously converted into physiological maladjustment. Low achievers under pressure for a minimum score required for a pass and high achievers under pressure for a top rank are likely to suffer from examination fever at the advent of examination if they become overanxious.

Educational Implications:

Successful and happy life is the ultimate objective of any individual. Mental health is the basic requirement for success and happiness in life. Home, school and society must help children develop sound mental health. Schools play a vital role in this process. Through the meetings of parent-teacher association schools can offer guidelines to parents how a conducive home climate can promote mental health of children. Such meetings can also outline society's responsibility in promoting mental health of its members, especially children. If parents love their children and provide them opportunities to meet their legitimate needs home climate is likely to be conducive for optimum development of their children. Positive feelings and emotions can be taught to children by parents more by practice than by instruction. The interpersonal relations among the siblings at home also determine their mental health. School can effectively interact with parents and suggest measures of promoting home climate – general as well as specific. School counsellors can have sittings with parents and children to arrive at a working formula for promoting home climate – the general emotional climate at home.

Community outside the school campus should also help promote a conducive climate for maintenance of sound mental health of its members especially children. Schools through their extension services can educate the community through its leaders

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on the necessity of social health or community health – its

maintenance and promotion. Functions and cultural activities organised and conducted in schools can remind the community of its rich cultural heritage, social norms and values. A society with rich cultural and social norms and values can promote general social health and , in turn, mental health of its members especially young school going children.

There is no separate curriculum for improvement of mental health of children. Much depends upon the campus climate, classroom climate and the teacher. Teacher must have sound mental health. Teacher's mental health is not only a personal necessity but a professional responsibility as well. If a head of a family is mentally ill, the family is ruined. If a head of a class (teacher) is mentally ill, the class is ruined. Teacher, incidentally (unintentionally), teach their students their own philosophy of life through their reactions, points of view and remarks expressed while teaching in the class. Young children who take their teachers as role models are likely to subscribe to their philosophy of life. Teachers must have a nice temperament and positive altitude towards their subjects and students. They must maintain a conducive classroom climate. They must have faith in basic human values and teach their students these values by practice. They must identify students with mental health problems and direct them to the school counsellor.

School counsellors must approach children with mental health problems with sympathy and empathy. They must have a series of sittings with such children. They must help children develop a problem solving attitude. Children must be taught how to avoid stress and how to deal with it if unavoidable; how to choose reachable goals to avoid frustration, how to set goals based on their aptitude and interest and how to reach these goals in a phased manner; how to set sequential goals for their entire life based on their capacities and aspiration; how to identify

approaching conflicts and how to resolve them; how to attain

interharmony and intraharmony; how to cherish and practise basic human values; how to develop a sound theory of life and thereby learn and practise the art of living.

Teachers, in general, and counsellors in particular, should possess sound mental health. A mentally unhealthy person cannot cultivate mental health in others. Here is a list of guidelines for teachers to maintain and promote their mental health:

- Accept yourself (your strengths and weaknesses) don't compare yourself with others; it may result either in self-boosting or self-negation; accepting oneself will result in intraharmony (adjustment).
- Accept others (their strengths and weaknesses)
- Make the best use of their strengths and develop strategies of dealing with their weaknesses; accepting others will result in inter harmony.
- Work towards self-enrichment.
- Work towards job enrichment
- Identify sources of unhappiness and job dissatisfaction and develop strategies of dealing with them.
- Identify sources of happiness and job satisfaction and make the best use of them.
- Recognize new possibilities in teaching and deliberately expose yourself to new experiences.
- Talk it over with friends (emotional release of tension)
- Get physical release of tension
- Get professional help if need be
- Develop scientific approach to problem solving
- Develop a positive philosophy of life and art of living.

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Questions:

1. Define and explain the meaning of mental health. Identify its indicators (in about 150 words).

2. What is meant by Mental hygiene? (in about 150 words)

3. What is meant by stress? What strategy should one employ to manage stress? (in about 75 words).

4. Define frustration. Explain it with a diagram. How do people react to frustration? Which is the best way of dealing with frustration? (in about 150 words).

5. What do you mean by conflict? What are the different types of conflict. Explain with appropriate diagrams. (in about 300 words).

6. What is meant by problem solving attitude? Distinguish between coping attitude and defensive attitude (in about 150 words).

7. Outline the most prominent defence mechanisms employed by students in general (in about 500 words).

8. What are the educational implications of defensive behaviour (in about 150 words).

9. What steps will you, as a teacher, initiate to improve yours as well as your students' mental health? (in about 300 words).

10. "Teacher's mental health is not only a personal necessity but a professional responsibility". Discuss.

SECTION VII
SUPPLEMENTARY READINGS

- The Adolescent learner
- Later theories related to learning ---
  (Piaget, Gagne, Ausubel, Bruner and
Bloom)
- Individual differences
- Guidance and counselling
- Psychoanalysis

In this section an attempt is made to highlight and discuss some psychology oriented topics supplementary to the topics discussed in the previous sections..

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CHAPTER 26
THE ADOLESCENT LEARNER

Content Outline: Adolescence – Its characteristics – Stanley Hall – Maturing process – Gender differences – Developmental tasks – Identity – Role of the teacher – Research Implications – Self Concern – Empathy – Emotional maturity – Treatment of the adolescent.

The three focal areas of the psychological foundations of education are the learner, the learning process and the learning situation. The first focus is naturally on the learner. This implies that understanding the learner-his psychological field is the first phase of effective teaching. Teaching becomes most challenging when we teach adolescent boys and girls. A knowledge of the psychological field of the adolescent learner will enhance the effectiveness of teaching. So let us now focus our attention on the various aspects of the field of the adolescent learner.

Adolescence is a period of transition from childhood to adulthood. This period is also known as the 'teen age period' or the inbetween years. Its age limits are not clearly specified, but it extends roughly from age 12 to late teens, when physical growth is nearly complete. During this period, the young person develops maturity, establishes an identity as an individual, and faces the task of deciding how to earn a living.

A few generations ago, adolescence, as we know it today was non-existent. Many teen agers worked 14 hours a day and moved from childhood into the responsibilities of adulthood with little time for transition. With a decrease in the need for unskilled workers and an increase in the need in the length of apprenticeship

required to enter a profession, the interval between physical maturity and adult status has lengthened. Young people are not given many adult privileges until late in their teens.

A gradual transition to adult status has some advantages. It gives the young person a longer period to develop skills and prepare for the future, but it tends to produce a period of conflict and vacillation between dependence and independence. It is difficult to feel completely self sufficient while living at home or receiving financial support from one's parents.

Dr. Stanley Hall was the first scholar to draw a vivid and striking picture of the period of adolescence. His splendid portrayal of this period as one of 'storm and strife' and 'stress and strain' is fairly self-explanatory. He compares the adolescent person to a flapper (small bird) 'yet in the nest and vainly attempting to fly while its wings have only pin feathers'. The adolescent persons are in the "neither here nor there" position in the sense that they are neither children nor adults. Tagore in his 'Homecoming' gave a superb pen picture of this period by writing on 'a boy fourteen'. And here are the striking lines: "In this world of human affairs, there is no worse nuisance than a boy of fourteen. He is neither ornamental nor useful. If he talks with a childhish lisp he is called a baby and if he answers in a grown up way he is called impertinent. It is easy to excuse the shortcomings of early childhood but it is hard to tolerate even unavoidable lapses in a boy of fourteen. The lad himself becomes painfully self-conscious; yet it is at this very stage that in his heart of hearts the young lad most craves for recognition and love and he becomes devoted slave of any one who shows him consideration. But none dare openly love

him for that would be regarded as undue indulgence and bad for the boy. So what? With scolding and chiding he becomes very much like a stray dog that has lost its master".

Psychologists and Educationists have made an 'indepth' study of this period and suggested ways and means of dealing with adolescent boys and girls. At the onset of adolescence, most youngsters experience a period of very rapid physical growth culminating in puberty. There is wide variation among girls in the ages at which puberty is reached. Boys show a similar range in the ages at which they reach sexual maturity. Although girls on the average mature earlier than boys, there are individual differences. Some girls will mature later than some boys. Numerous studies have investigated whether there are personality differences between early and late maturing children.

Late maturing boys face a difficult adjustment because of the importance of strength and physical prowess in their peer group activities. During the period when they are shorter and less sturdy than their classmates, they may lose out on practice of game skills and may never catch up with early maturers, who take the lead in physical activities. Studies indicate that boys who mature late tend to be less popular than their classmates, have poorer self-concepts, and engage in more immature, attention- seeking behaviours. They feel rejected and are dominated by their peers. The early maturers, on the other hand, tend to be more self confident and independent.

The effects of rate of maturation on personality are less striking for girls. Some early – maturing girls may be at a disadvantage because they are more grown-up than their peers at the middle school level. In high school classes the early maturers tend to have more prestige among classmates and take leadership

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in school activities. At this stage the late-maturing girls may have less adequate self-concepts and poorer relations with their parents and peers. To reduce the negative feelings of selfworth in the late maturing boys and girls it is important that they be made aware of the fact variation in the age of maturity is perfectly normal. The developmental tasks related to the physical growth of the adolescent period are opportunities for appropriate physical exercises and provision for nutritious diet.

A major task confronting the adolescent is to develop a sense of an individual identity- to find answers to questions 'who am I' and 'where am I going? The search for personal identity involves deciding what is important or worth doing and formulating standards of conduct for evaluating one's own behaviour as well as the behaviour of others. It also involves feeling about one's own worth and competence.

Adolescents' sense of identity develops gradually out of various identifications of childhood. Young children's values and moral standards are largely those of their parents; their feeling of self-esteem stem primarily from the parents' view of them. As youngsters move into the world, the values of the peer group become increasingly important – as do the appraisals of teachers and other adults. Adolescents try to synthesize these values and appraisals into a consistent picture. To the extent that parents, teachers and peers project consistent values, the search for identity becomes easier.

When parental views and values differ markedly from those of peers and other important figures, the possibility for conflict is great and the adolescent may experience what is called role

confusion – the adolescent tries one role after another and has difficulty synthesizing the different roles into a single identity. In a society where identification models are few and social roles are limited, the task of forming an identity is relatively easy. In a complex society it is a difficult and lengthy task for many adolescents. They are faced with an almost infinite array of possibilities in terms of how to behave and what to do in life.

The search for identity can be resolved in a number of ways. Some young people, after a period of experimentation and soul searching, commit themselves to a life goal and proceed towards it. For some, the identity crisis may not occur at all; these are the adolescents who accept their parents' values and proceed towards a career consistent with their parents' views. In a sense, their identity 'crystallized' early in life. Still other people adopt a deviant identity – one that is at odds with the values of the society. Other adolescents may go through a long period of identity confusion and have great difficulty in 'finding themselves'. In some cases an identity definition may ultimately be worked out after much trial and error. In others, the person may never have a strong sense of personal identity as an adult. This is the individual who never develops commitments or loyalties.

One way of approaching the identity problem is to try out various roles and ways of behaving. Many experts believe that adolescence should be a period of role experimentation in which the youngster can explore different roles.

But unfortunately the academic competition and career pressures of the day deprive many adolescents of the opportunity to explore.

The role of the teacher is to help the adolescent learner solve 'identity crisis' that is to help him assume a role that is in conformity with his personality and aptitude. Here is a case for effective guidance and counselling.

According to one school of thought, our society has been changing so rapidly that the values of today's parents are inappropriate to the problems and conditions faced by their teen-age children. Rapid scientific and technological advances have tended to make parental knowledge obsolete with reference to what their children are expected to know. These and other factors have led some experts to conclude that there is an almost insurmountable gap between the values of todays' parents and those of their adolescent sons and daughters. They view with alarm the lack of understanding and communication between the two generations.

Recent research, however, leads to a much less pessimistic view. There is indeed some distance between the attitudes of the two generations but it is not so great as the mass media would have us believe. The problem of bridging the generation gap can be discussed in parent teacher association meetings and modes of approaching and solving it arrived at.

The adolescent's growth in ability to interact with and respond to others is accompanied by two somewhat conflicting developments. On the one hand, he becomes more aware of the needs and feelings of other people, but on the other hand, he is inclined to develop a kind of anxious self- concern.

Behaving in ways that are considerate towards others involves, among other things, the ability to empathize - the ability to put ourselves in others' shoes and see things as they see them.

Empathy is an ability that requires emotional maturity; it requires a willingness to value and understand the feelings and attitudes of others, as a willingness to admit them; there may be a number of different points of view on a given subject. The adolescent who is successful in developing satisfactory relations with peers is bound to develop a certain measure of empathy, for his success in getting along with his group will depend on his ability to be aware of and to respond to their attitudes and feelings. When it comes to relations with adults, adolescents tend to show least empathy. This may be due to certain feeling on their part that it is more important for adults to understand adolescents than for adolescents to understand adults, or it may be a result of limited experience adolescents had with adult roles. Empathy is further blocked by the common tendency of adults and adolescents to be 'on the defensive' against each other - an attitude that is hardly conducive to mutual understanding. Empathy gradually emerges as a personality trait when teen agers begin to play adult roles. As they take positions of responsibility they begin to have experiences that provide some bases for understanding adult frame of reference. Further, looking ahead to the adultroles they will be playing a few years hence also helps them to understand the viewpoint of adults. Naturally this understanding must be fortified by the desire to understand others' points of view.

Most teachers, parents and other adults ordinarily contribute little by way of setting an example. If adolescents play the role of the antagonist, it is partly because adults put them into the role.

Often adults- teachers and parents permit their personal problems to interfere with their relations with teenagers. As long

as parents are concerned principally with their own needs, it is difficult for them to empathise with their children.

There is, as one might expect an inverse relationship between self concern and empathy that is, the greater the self-concern, less the empathy. The individual who is preoccupied with his own needs and problems has little time or energy to devote to understanding the frames of references used by others. The adolescent, particularly during the early teen years, has compelling reasons to be preoccupied with self. He is likely to feel a great deal of insecurity in his relations with others and particularly with adults. Part of growing up is the learning of new roles, new ways of behaving and new expectations for oneself. The teen ager who is beginning to look like an adult is expected to behave like one. He is eager to display adult behaviour. The difficulty is that he is not exactly sure what kinds of adult behaviour are appropriate or how it feels when one is behaving like an adult. Perhaps the problem would be simplified if there were standards of teenage behaviour, different from adult standards and accepted by society, but society has no special standards for the behaviour of this group. In effect, society hopes and expects that teenagers will behave like adults, but not too much like adults. This is not much help for the teenager who is feeling his way into adulthood and who often has no way of knowing whether he has gone too far or not far enough. Further he has two audiences to satisfy: teenage society and adult society. Often the behaviour that satisfies one group irritates and upsets the other.

Some major forces which operate in the psychological field of the adolescent learner have been highlighted. A knowledge of

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these forces and how they operate will help the teachers to approach the learners with better understanding. Such an approach establishes a good rapport which will facilitate effective communication and consequently effective teaching. As regards the cognitive development of the learner psychologists and educationists observe that during the period of adolescence the learner is close to his maximum intellectual efficiency. In piagetian terminology they are in the period of 'formal operations' – a period of abstract thinking and logical reasoning. Curriculum framers must have this in mind when they structure curriculum for this age group. Teachers must be resourceful enough to employ appropriate instructional strategies to interest, stimulate and challenge the adolescent learners. Of course there are individual differences. All do not operate at the same level of intellectual efficiency. But the fact is that every one is at 'his best' of his intellectual efficiency at this period and this fact is to be taken note of by parents and teachers.

An educational programme meant for the adolescent learner must take into account of his physical, social, emotional and intellectual growth and development. Such a programme offers 'total education' to the adolescent learner and such a 'total education' of the adolescent learners will bring forth effective citizens for our nation. Teachers and parents have a vital role to play in this venture.

Questions:

1. What is meant by Adolescence? What are its characteristics? (in about 150 words).

2. Why did Stanley Hall portray this period as one of 'Storm and Strife' and 'stress and strain'? (in about 150 words).

3. How does the rate of maturing affect the adolescents? (in about 150 words).

4. Outline briefly gender differences in the maturing process of the adolescents. (in about 150 words).

5.   What developmental tasks are identified by psychologists for the adolescent boys and girls with special reference to identity, role, empathy, self-concern and emotional maturity? (in about 300words).

6. Outline a programme of action of treating the adolescent boys and girls by parents and teachers (in about 300 words)

7. "The period of adolescence is one of 'Stress and strain and 'Storm and Strife' to most individuals Resourceful parents, elders and teachers can make it a period of 'Peace and Poise' and lead these boys and girls to success and happiness" – Discuss (in about 300 words).

CHAPTER 27
LATER THEORIES RELATED TO LEARNING
(Piaget, Gagne, Ausubel, Bruner and Bloom)

Content Outline: Piaget's theory – Stages of cognitive development – Educational implications – Gagne's conditions of learning – Ausubel's meaningful verbal learning – Bruner's 'Discovery learning ' - Bloom's taxonomy of educational objectives.

Piaget

Piaget has achieved a unique status as the authority on the general intellectual development of children. His hierarchy of stages of intellectual development has been endorsed and applied by many psychologists and educators.

The salient features of the four major stages of intellectual development identified by Piaget are herein outlined.

1) Sensorimotor Stage (0 – 2)

Noting the close interplay between motor activity and perception in infants, Piaget designated the first two years as a sensorimotor stage. During this period, infants are busy discovering the relationships between sensations and motor behaviour. They learn, for example, how far they have to reach to grasp an object and what happens when they push their food dish to the edge on the table. Through countless experiments infants begin to develop a concept of themselves as separate from the external world. An important discovery during this stage is the concept of object permanence - an awareness that an object continues to exist even when it is not present to the senses. If a cloth is placed over a toy for which an eight month old is reaching,

the infant immediately stops and appears to lose interest. The infant seems neither surprised nor upset, makes no attempt to search for the toy, and acts as if it ceased to exist. In contrast, a 10 month old will actively search for an object that has been under a cloth or behind a screen. The older baby seems to realise that the object exists even though it is out of sight. The infant has attained the concept of object permanence. But even at this stage search is limited; if the infant has repeated success in retrieving a toy hidden in one place, the baby will continue to look for it in that spot even after having watched while it was being concealed in a new location. Not until about one year of age will a child consistently look for an object where it was last seen to disappear regardless of what has happened on previous trials.

2) Preoperational Stage (2 – 7)

By about oneanda half to two years of age, children have begun to use language. Words, as symbols, can represent things or groups of things. And one object can represent or symbolise another. Thus in play a three year old may treat a stick as if it were a horse and ride it around the room; a block of wood can become a car; one doll can become a mother and the other a baby. Although three and four year olds can think in symbolic terms, their words and images are not yet organised in a very logical way. Piaget calls the two-to-seven years stage of cognitive development preoperational because the child does not yet comprehend certain rules or operations.

As adults we take conservation principles for granted: the amount or mass of a substance is not changed when its shape is changed or when it is divided into parts; the total weight of a set of objects will remain the same no matter how they are packaged

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together, and liquids do not change in amount when they are poured from a container of one shape to that of another. For children, however, attainment of these concepts is an aspect of intellectual growth that requires several years.

In a study on the conservation of mass, a child is given some clay to make into a ball equal to another ball of the same material; the child declares them to be "the same", now, leaving one for reference, the other is rolled out into a long cylinder shape while the child watches. If the child is about four years old, he no longer considers the two objects to contain the same amount of clay; the longer one contains more. Not until the age of seven do the majority of children reach the stage where the clay in the longer object is perceived to be equal in amount to that in the reference ball.

The same kind of experiment can be used to study the conservation of weight. For example, children who know that equal things will balance on a scale are asked whether the long cylinder shaped form will keep the scale arm balanced as did the original ball. Conservation of weight is a more difficult concept to conceive than conservation of mass, and it comes a year or so later in development. Children younger than seven have difficulty with conservation concepts because their thinking is still dominated by visual impressions.

3) Concrete Operational Stage (7 – 12)

Between the ages of 7 and 12, the concrete operational stage, children acquire the capacity to reason effectively about things, but not yet about verbal propositions. Their reasoning ability is characterised by the development of three important skills- transitivity, conservation and class inclusion. Transitivity is

illustrated by children's capacity to arrange elements in a series. If X = Y and Y = Z, then X = Z. Assume for example that a child is shown three different balls A, B, C which differ in size. The child can tell by looking at them and without comparing them directly, that if A is bigger than B, and B is bigger than C, then A is bigger than C. On the other hand, concrete – operational children are less able to reason about verbal propositions. When they are given the problem, 'P' is taller than Q, and Q is taller than R, who is the tallest of the three? they are unable to solve it despite the fact that it is comparable to the previous problem.

Conservation is one of the most significant characteristics of cognitive activity to be acquired during the concrete-operational stage. Children discover the meaning of constancy in the course of any given change or transformation. They learn the logical thought permits reversible operations. They recognise that subtraction can cancel addition and division can cancel multiplication.

Children also learn, at the concrete operational stage, to differentiate the world in terms of logical classification. They learn to categorise and to create hierarchies of classes. Although children at the concrete level of cognitive operations are beginning to put their thoughts together, the logic of their thinking is dominated by direct personal experience. Although children, now, are using abstract terms, they are doing so only in relation to concrete objects.

4) Formal Operational Stage (12+)

During this stage of formal operations that begins around the age of 12 youngsters are able to reason in purely symbolic terms. In one test for formal operational thinking, the subject tries to discover what determines the period of oscillation of simple

pendulum. The subject is presented with a length of string suspended from a hook and several weights that can be attached to the lower end. He can change the length of the string, change the attached weight, and alter the height from which the bob is released. Children still in the concrete operational stage will experiment changing some of the variables, but not in a systematic way. Adolescents of even average ability will set up a series of hypotheses and proceed to systematically test each one. They reason that if a particular variable (say, weight) affects the period of oscillation, then the effect will appear only if they change one variable and hold all others constant. If this variable seems to have no effect on the time of swing, they rule it out and try another. Considering all the possibilities, working out the consequences is the essence of what piaget calls formal operational thought. This ability to conceive of possibilities beyond what is present inreality-to think alternatives to the way things are – permeates adolescent thinking and is tied in with adolescent's tendency to be concerned with metaphysical and ideological problems.. Formal operations allow adolescents to think about thought itself. It is not until early adolescence that most people can play complex word games; learn algebra, and do other tasks that involve the mental manipulations of complex thoughts and concepts. Formal operations are also necessary for a fuller grasp of historical time and geographical distance. And adolescents can now think and talk about such abstract notions as 'beliefs' 'values' and 'ideals'.

One of his earliest theories deals with the speech of the child. He maintains that the conversation of a young child is primarily ego centric in the sense the preschooler makes little attempt to exchange ideas with others. At about the age of 7 or 8 the child shifts to socialised speech, and it is not until this stage of development that he becomes capable of considering another point of view. In the moral concept of the child piaget observes that the young child is a moral realist – a person applies the letter rather

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than the spirit of the law and makes no allowances for circumstances. The older child is capable of moral relativism – taking the situation into account. Piaget maintains that intelligence of the child is rooted in two biological attributes – organisation and adaptation. Organisation is the tendency of the child to integrate processes into coherent systems. Adaptation is the innate tendency to interact with environment through assimilation and accommodation. Experiences are assimilated and when new experiences are encountered accommodation or modified way of reaching emerges.

The entry age and the exit age indicated by Piaget for each of the four periods of cognitive development are not hard and fast demarcations. There are individual differences. It is the sequence that counts. Studies were conducted by researchers on the effectiveness of special training and instruction in accelerating these stages. Results are conflicting; instruction does yield some acceleration; however, progress from one stage to the subsequent depends on maturational changes, so that training is effective if it occurs when the child is ready. Piaget suggests that teachers use this hierarchy not to accelerate stages but try to understand why children think and reason as they do, and to help them master intellectual processes at the appropriate stage. An exposure to his theory helps us structure instructional objectives appropriate to the age group of children. It helps us in developing a curriculum based on these objectives, in employing suitable instructional strategies and also in devising effective modes of evaluation.

Gagne

Gagne, in his book, 'The conditions of learning' highlights his analysis of research on learning. He feels that a more promising approach is to take into account different types of learning. He feels that there is a hierarchy of eight progressively complex types of learning:

Signal learning is exemplified by the classical conditioning experiments of Pavlov, in which an involuntary reflex is activated by a selected stimulus (eg. A dog salivates when a bell rings). Since such learning involves involuntary responses, it is basically different from other types.

Stimulus-response learning is exemplified by the operant conditioning experiments of skinner, in which a voluntary action is reinforced (e.g. a pigeon is given a food pellet when it pecks a disc).

Chaining is exemplified by experiments of Kohler, in which the subject learns to connect several stimulus- response bonds in a specific sequence (e.g. an ape takes in a long stick and then a banana).

Verbal association – in which a student learns to connect more complex chains of stimulus- response bonds.

Multiple discrimination – in which a student learns to respond differently to similar verbal associations as his store of them becomes more numerous and complex (e.g. a child learns that there are different kinds of dolls).

Concept learning – in which the learner responds to things or events as a class (e.g. the concept of colour, size or shape).

Principle learning – in which the student learns to combine, or relate, chains of concepts (e.g. a child combines the concepts round and ball when he learns round balls roll).

Problem solving – in which the individual learns to combine principles in a way which permits him to apply them to a wide variety of new situations (e.g. a child who understands that round things roll puts a ball in a place where it will not roll away).

These are the eight types of learning hierarchically structured. Gagne observes that the more advanced kinds of

learning can take place only when a person has mastered a large variety of verbal associations which, in turn, are based on a great deal of stimulus response learning. A student is more likely to master a concept if he is familiar with a variety of verbal associations, more likely to understand principles if he hasmastered appropriate concepts, and more likely to solve problems if he has understood a large number of appropriate principles.

Since teaching problem solving is the ultimate educational objective Gagne advocates a series of steps in teaching this ability.

- Let us teach our students the verbal associations, concepts, and principles and the necessary background information for dealing with a given area of study.
- Let us encourage a classroom atmosphere conducive to free inquiry.
- Let us encourage productivity of ideas – and a free expression before a receptive audience.
- Let us set a good example as a thinker.
- When appropriate, let us teach techniques of problem solving.
- Let us keep in mind the nature of individual differences in problem solving ability.

How to teach problem solving technique?

In the first phase – that is preparation – we present problems or encourage our students to state problems of their own. In the second phase, we assist our students to gather relevant information. Here we teach them how to make the best use of the resources available. In the third phase we allow for an uncubation period where ideas are sorted out. In the fourth phase illumination (also called 'aha' experience) occurs. Here we urge the student to state the solution to his problem in the form of a hypothesis. In the

fifth and the final phase we advocate empirical testing of the hypothesis in specific situations.

Ausubel

David Ausubel is unusual amonge educational theorists. He directly addresses the goal of learning subject matter. He advocates improvement of presentational methods of teaching at a time when other educational theorists and social critics are challenging the validity of these methods and finding fault with the passiveness of expository learning. Ausubel stands for mastery of academic material.

Ausubel is also one of the few educational psychologists to address himself simultaneously to learning, teaching and curriculum. His theory of meaningful verbal learning deals with three concepts:

- How knowledge – curriculum content – is organised
- How mind works to process new information – learning
- How teachers can apply these ideas about curriculum and learning when they present new materials to students – instruction.

The theory of meaningful verbal learning and its derivative, the advance organiser model of teaching, provide recommendations to teachers for selecting, organsing and presenting new information. This model has three phases of operation. In phase one the advance organiser is presented; in phase two the learning task or learning material is presented; in phase three the cognitive organisation is strengthened. The actual organiser is built around the major concepts of a discipline or area of study. It is at a higher level of abstraction – a key statement to be presented, elaborated, discussed, clarified and fixed in the mind of the learner by meticulously designed steps.

Ausubel's theory seems to be more a theory of teaching rather than a theory of learning. It is a theory of teaching with focus on mastery of the learning material. A sound theory of teaching takes into account learning as its prime concern. Ausubel's concern is how to make teaching effective so that verbal learning can be made more effective resulting in the mastery of academic content.

Bruner

Bruner is associated with 'Discovery learning'. In his work on 'The Art of Discovery' Bruner claims several merits of discovery learning;

- It enhances intellectual potency; the student acquires information in such a way that it is readily available in problem solving.

- It increases intrinsic motivation; it strengthens the student's tendency to carry out his learning activities with the autonomy of self- reward; the reward is discovery itself.

- It teaches the students the techniques of discovery; solving problems through discovery develops a style of problem solving.

- It results in better retention since the student has organised his own information and knows where in his storage system to find it when he needs it.

Bruner sets out to study a thinking process called Categorizing. According to him categorizing activity has two components – concept formation and concept attainment. The learner can best achieve these two phases through discovery learning based on experience. The learner must experience knowledge. This is the focus of 'Discovery learning' or 'Learning by self discovery'. Excessive exposition of academic content is

avoided. The learner is assisted to discover the content by himself. He is led in the path of discovery by appropriate instructionalguidelines. It is not only the matter that counts but the manner through which the matter is presented. It is not only what the learner learns but also how he learns it is equally important.

While Ausubel highlights the role of effective lectures in teaching, Bruner underlines the role of discovery learning through Heuristic method of teaching. If your focus is on the mastery of basic concepts, and training the learner in discovery, the method of teaching must be, of course, 'discovery'. If, on the other hand, your focus is on the coverage of academic content in a short time through meaningful learning, the method of teaching, must be, of course, an effective lecture. As a matter of fact, it must be a judicious mixture of both for a class in general. Though 'discovery' as a method of teaching is laborious and time consuming, if teachers are resourceful and intrinsically motivated in discovery they can train themselves and the results will be rewarding both for the teacher and the student.

Bloom

Bloom collected items that leading educators felt students should learn and then classified these objectives into three domains: Cognitive, affective and psychomotor. The cognitive domain covers the same general types of learning in Gagne's verbal associations, concepts, principles and problem solving. The affective domain relates to attitudes and values and the psychomotor domain to skills.

Bloom's taxonomy provides a comprehensive classification of all the goals the schools should try to achieve in their efforts to produce educated citizens. If one wanted to create a complete curriculum for the entire educational career of a student he could

use the taxonomy as a guide. Since we are not likely to be faced with such a master planning problem, we will probably find it more helpful to focus on those sections of the taxonomy which relate to our class and subject area.

Bloom identified six major categories under cognitive domain. The first category is knowledge. (knowledge of terminology, specific facts, conventions, trends and sequence, classifications and categories, criteria, methodology, principles and generalisations, theories and structure).

The other five categories are grouped under intellectual abilities and skills.

The first category under this group is comprehension which includes translation, interpretation and extrapolation.

Application refers to the ability to apply principles to actual situations.

Analysis refers to ability to discriminate and comprehend interrelations and make a critical analysis.

Synthesis refers to the ability to rearrange component ideas into a new whole.

Evaluation refers to the ability to make judgments based on internal evidence or external evidence.

A knowledge of the categories of Bloom's Taxonomy of educational objectives will help teachers in framing specific instructional objectives and in structuring test items.

At the knowledge level, the learner recalls or recognizes ideas. At the comprehension level, he explains ideas. At the application level, he uses ideas. At the analysis level, he splits a main idea into a number of subsidary ideas each of which is interrelated and logically linked to one another. At the synthesis level, he combines a number of minor ideas to arrive at a major

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idea. At the evaluation level, he judges or passes verdict on stated ideas.

For illustration, let us have the same topic 'Bloom's taxonomy of cognitive levels' and structure items:

Identify the six hierarchical levels of Bloom. (It is a knowledge item)

What does Bloom mean by comprehension level of cognition?   (It is a comprehension item)

Structure an item at the application level on any unit of your interest in your subject .(It is an application item)

What are the different components of Analysis. How are they interrelated and logically linked? (It is an analysis item)

Establish how an item on synthesis is cumulative involving all the other lower levels of cognition. (It is a synthesis item)

To what extent is Bloom's taxonomy of cognitive levels useful to the teacher in structuring an effective test? (It is an evaluation item).

Questions:

1. Attempt a critical estimate of Piaget's theory of cognitive development bringing out its educational implications (in about 600 words).

2. What are the educational implications of Gagne's conditions of learning (in about 300 words).

3. Distinguish between Ausubel's theory and Bruner's theory with reference to teaching and learning. Are they contradictory or complementary? (in about 300 words).

4. "Bloom's taxonomy of educational objectives is more evaluation oriented than instruction oriented". Discuss (in about 300 words).

5. To what extent do these later theories complement and supplement earlier theories of learning? (in about 600 words).

CHAPTER 28
INDIVIDUAL DIFFERENCES

Content outline: Individual differences – Inter and Intra – Role of Nature and Nurture – Gender differences – Catering to individual differences.

Individuals are not created equal, nor do they become more alike as they grow older. By the time they enter school, physical, intellectual, social and emotional differences have increased substantially. Then as they move upward these differences steadily increase. Each of us is a unique individual, with a distinctive pattern of thoughts, feelings and behaviours. One of the central tasks of psychology is to map these differences between people and to explain how they come about. No two people are identical, even identical twins develop quite different patterns of behaviour. Each individual is a special and unique assortment of traits. Individuals not only differ from one another, but each individual differs greatly in his ability for several tasks or fields of learning. Individuals differ from one another in physical, social, intellectual and emotional growth and development. The major areas of individual differences are intelligence level, physique, achievement, aptitude, interests, personality dimensions and gender differences.

Two major factors which contribute to individual differences are heredity and environment- nature and nurture. An individual's height, the size of his bones, the colour and texture of his hair, the colour of his eyes, the shape of his face, nose, mouth, hands and feet, the nature of his entire physical structure in fact all that he is physically and mentally is determined largely by his inheritance. Even within the same family children differ from one

another because they do not develop out of the same combination of genes. Heredity is often described as a stream of potentialities of numerous traits passing from one generation to another so that children inherit not from parents but through parents from the huge stock of potentialities of numerous traits.

The human nature is shaped through the interaction between the human organism and environment. Our environment is our habitation in the fullest sense. Not only our physical surroundings, but also people around us, social customs and traditions, culture, education and training all constitute our environment. What we call social heritage, ideas and ideals, is a part of our environment.

Research studies on the relative influence of nature and nurture on the growth and development of the individual reveal the following major findings: Heredity does not completely determine any trait. Training and life experiences may have profound effects on many traits. Heredity influences some traits more than others. Inheritance is apparently more potent in determining the level of intelligence, physique and temperament (a vital component of personality).

Environment has greater influence in shaping specific habits, personality characteristics, attitudes, beliefs and values. Poor environment can suppress or even nullify good inheritance but good environment, unfortunately, is not a substitute for good inheritance. An improved environment does not produce a remarkable increase in basic mental capacity but with better teaching and more intellectual experiences the mental abilities of the students come nearer to approximating their inherited mental capacities. Heredity determines what an individual can do and

environment what he does do within the limits imposed by heredity. Though heredity (nature) seems to play a vital role in determining the degree of intelligence of an individual it is environment (nuture) that plays a vital role in determining the personality of an individual. This fact is fairly an encouraging one since the ultimate objective of education is development of personality of the learner and educational institutions constitute a potent dimension of environment. Individuals differ from one another since they differ not only in their inheritance but in their environment as well.

Let us now briefly discuss the psychological differences between the male and the female. Some of the differences-physical are obvious. However physical differences do not have much to do with men and women's personalities or with their social and occupational roles. The disparities between the roles that men and women play - the likelihood that the man is the wage earner and the woman is the child rearer and he is the boss and she secretary – are not based on physiological differences at all. Rather they are often based on assumptions about psychological differences between men and women. Such psychological differences are often taken for granted. Maccoby and Jacklin reviewed and integrated the extensive research literature on psychological gender differences, reading through some 2000 books and articles in the process. They concluded that many of the differences that are commonly believed to exist between the male and the female are in fact myths. For example there is no good evidence that boys are more independent, ambitious, or achievementoriented than girls or that girls are more nurturant, sociable or suggestible than boys. If many of the stereotypical

differences between gender are myths, then why are they perpetuated? There are two answers to this question. The first is that our perception of other people is selective. When someone behaves in an expected way (a boy running and shouting, a girl sitting and playing quietly) we take note of the behaviour and assume that it reflects the person's underlying temperament. When, on the other hand, some one behaves in an unexpected way, the behaviour may go unnoticed or may be passed off as a fluke. An active shouting girl may be viewed as imitating her brother, a quiet little boy as being tired. The second reason for the perpetuation of the myths concerns the different opportunities that society provides for men and women. The differences that we observe probably result from social values and opportunities rather than from basic psychological differences. These observations of Maccoby and Jacklin must be eye openers for parents, teachers and educational authorities and others who function in the field of education. Here is a case for equal opportunities for boys and girls in all areas of academic activity. Selection for any course of study is to be based on aptitude, attitude and interest and not based on gender.

The inter differences and the intra differences among individuals in intelligence, achievement, aptitude, attitudes, abilities, interests and other personality dimensions seem to pose a challenge to equalization of educational opportunities. But equalization of educational opportunities does indeed mean providing opportunities to each learner in accordance with his abilities and interests. But this task is not an easy one because for this we will have to:

- Construct valid and reliable tests for the measurement of abilities
- Provide opportunities to the learner so that he may experience

success in learning.

- Provide desirable environment so that the learner may get opportunities for the development of his native ability.
- Employ effective teachers who can teach boys and girls in accordance with their individual differences.
- Structure a flexible curriculum
- Obtain co-ordination between the formal and non formal agencies of education.

Perhaps the first task of a teacher should be to identify and analyse individual differences among his learners. How many of them cluster around the average, the range of difference and how many are at the extremes of the distribution.

There are four characteristics of individual differences which a teacher must keep in mind. The first is variability of the series of scores - the extent to which scores are spread along the scale from an average value such as mean, median or mode. If any group is measured with respect to a given trait the group will be found to vary and the range of this variation should be studied by the teacher.

The second characteristic of individual difference is normality. Measurement of large groups with respect to any traits usually follow the same bell shaped curve, called the normal curve, that is generally speaking a large majority of the group cluster round the average about 2% are at the each of the extreme ends; and 14% are placed between the average and the highest and between the average and the lowest end. Measurement of traits usually takes the form of this normal curve.

A third characteristic is that the rate of growth and learning differs from individual to individual. There are differences in

maturation, some mature early; others mature late, and there are differences of development, some developing faster than others.

A fourth characteristic of individual differences is that traits and abilities are interrelated that is variations in one trait or ability affect others. It is obvious that changes within the physical and mental make-up of an individual affects his work and life.

Equipped with a knowledge of such interrelations the teacher can make his work more effective. There are always some pupils who are slow to catch up with the programme and whose progress is retarded. Diagnosing the learning difficulties the teacher will be able to devise remedial programmes of instruction that will help such slow learners achieve better results.

No recent movement in education is so prominent as the attempt on the part of modern educational institution to adjust itself to the student rather than expecting the student to adjust himself to the institutions. In attempting to meet the varying needs, interests and abilities of students, several teaching procedures and types of student classification and promotion are being extensively used in progressive institutions. This recent attempt provides for all degrees of intelligence, both inferior and superior.

Students of education are inclined to think of individualized instruction as a ready solution to the problem of individual differences. The advantages of individualized instruction are obvious. It helps to concentrate attention on the work of the individual rather than on the average work of the class, and the teacher can acquire intimate knowledge of each student's interests and vocational tendencies. The slow learner is allowed to work at his own rate and shows more satisfactory results. The bright, instead of marking time with the mediocre, can go ahead and work

on more advanced assignments. The teacher gets an opportunity to develop diagnostic skill in observing how different pupils respond to a task or a problem. Thus individual instruction seeks to meet individual differences through a personalized system of instruction.

But individualized instruction misses the social value of group work and therefore group instruction is advocated. It has obvious advantages in so far as it is more economical. Group work provides for the social values of education. The slow learner is stimulated to do better by the example of brighter learners.

The practice of grouping students for the purpose of instruction is almost as old as the school and usually the basis of classification is the student's accomplishment. Homogenous grouping has been strongly criticized and harmful socially and psychologically, and this is injurious to social development. No doubt such homogenous grouping will meet the divergent needs, interests and abilities of individual students but it will foster class differences and divisions.
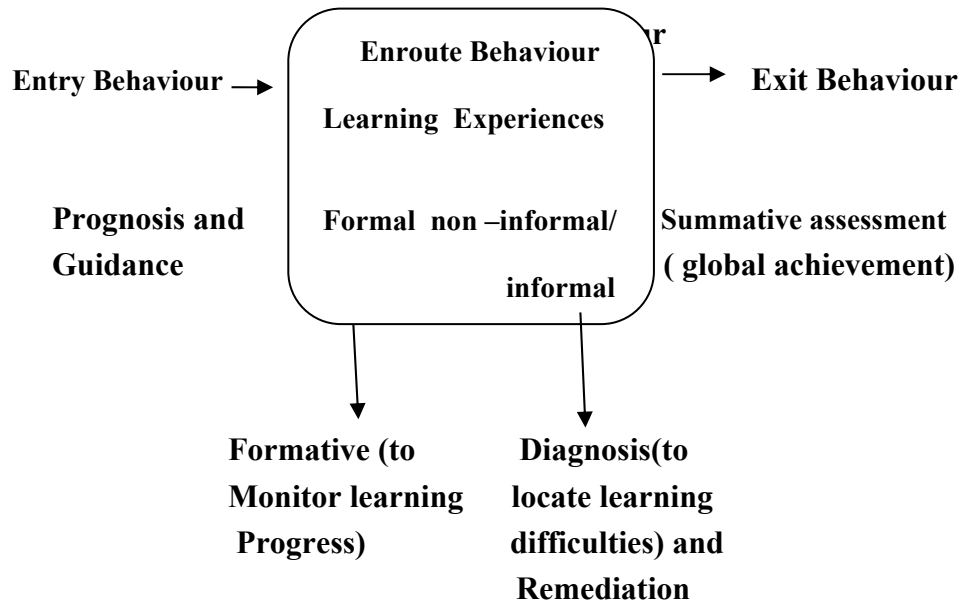
Student with special disabilities and handicaps will have to be given special attention. In large institutions psychological service should be available to identify such students and provide learning experiences for them according to their needs; they may have to be taught in special classes and suitable programmes may have to be devised for them.

In schools and colleges the election of courses offers a basis for great adjustments to individual differences but it should be accompanied by provision for educational and vocational guidance. A beginning has been made in this direction but much more needs to be done. If we select students for different courses not on the basis of their or parental preference but on the basis of

their aptitudes, interests and abilities, learning would be far more effective and meaningful.

The inter differences and the intra differences among individuals in intelligence, performance, aptitude, attitude, abilities, interests and other personality dimensions seem to pose a challenge to equalization of educational opportunities (not only educational but other social opportunities as well). Equalization of educational (or any other social) opportunities means providing opportunities (educational or social) to the individuals in accordance with their abilities and characteristics. This requires an effective measurement and evaluation programme through valid and reliable tests, inventories and such other modes of assessment.

Evaluation Programme

Entry Behaviour → | Enroute Behaviour
Learning Experiences

Formal non –informal/
informal | → Exit Behaviour

Prognosis and
Guidance

Summative assessment
(global achievement)

Formative (to
Monitor learning
Progress)

Diagnosis(to
locate learning
difficulties) and
Remediation

Any educational (Formal / Non - formal / Informal) programme will have objectives. These objectives must be realised through training / treatment / exposure to learning experiences. At every phase of the evaluation (entry / enroute / exit) there must be assessment to study the degree of realization of objectives. The purpose of evaluation is to find the extent to which the objectives of the programme are realised.

At the entry phase individuals are assessed to study their readiness to the treatments. It is prognositc evaluation followed by guidance to cater to the individual differences.

At the enroute phase individuals are assessed periodically to monitor learning progress (Are they on the right track?) ; further they are also assessed to identify learning difficulties, if any,

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through diagnosis (Diagnosis is followed by remedial programme of action).

At the exit phase, individuals are assessed through global achievement tests (and personality inventories and such other modes of assessment). The results of such a summative evaluation throws light on the extent of realisation of programme objectives and provide valuable feedback to the programme organizers.

The Problem of individual differences is a major factor which drew the attention of Psychologists to Guidance and Counselling. Psychologists who specialize in guidance and counselling must be experts in evaluation programmes (evaluation of maximum performance - Intelligence Tests / Aptitude Tests and typical behaviour - Personality inventories / interest inventories / attitude scales and such other assessment / appraisal tools) which will help them to identify and cater to the individual differences.

Questions:

1, Identify the different areas of individual differences (in about 150 words).

2. Distinguish between inter differences and intra differences (in about 75 words).

3. What is the role of Nature and Nurture in causing individual differences? (in about 300 words).

4. Attempt a critical estimate of gender differences (in about 300words).

5. Outline a programme of action of catering to the individual differences among the learners (in about 300 words).

CHAPTER 29
GUIDANCE AND COUNSELLING

Content outline: Guidance – Meaning and Definition – Sequential phases – Types of guidance – Educational, Vocational and Personal – Counselling – Counsellor's characteristics.

Years back, the author happened to read a book with the title, "Curriculum for Today's Boys and Girls" written by one Fleming. On the title page of the book you will find the picture of a child and a freelance poem underneath.. The poem seems to be an appeal made by the child to parents, teachers and others engaged in the task of educating the child. The freelance poem is fairly thought provoking:

"Let me grow as I be

And try to understand why I want to grow like me

Not like my Mom wants me to be

Nor like my Dad hopes I'll be

Or like my Teacher thinks I should be

Please try to understand and help me grow

Just like me"

The last line, "Just like me" is the key line. One wants to become oneself. A wants to become A. B wants to become B; C wants to become C. But unfortunately, parents, teachers and others, mostly unintentionally, prevent individuals from becoming themselves. We try to make A, B and B, A with the result both are restless and unhappy; nor are they useful to society. Here is an illustration: A learner has an aptitude for engineering course of studies. Suppose his parents impose a medical course on him. The result will be: society gets a bad physician and loses a promising engineer. It may be the other way round also in certain cases. Make

one become oneself. Then only one will be happy and useful to society. "Becoming oneself" means realizing one's talents and potentialities. This is exactly the function of Guidance. Guidance is defined as the process of helping individuals, through their own efforts, to discover and develop their potentialities both for personal happiness and social usefulness.

The sequential stages of guidance run thus:

- Help the learner discover himself. In other words the learner identifies his talents and potentialities.
- Help the learner develop these potentialities.
- Help the learner make the best use of his potentialities.
- And thus help him to be happy and useful to society.

To be specific, the learner will discover by himself his interests, attitudes, values, aptitude, motivation level and personality dimensions; he will choose courses of studies in accordance with these factors; he will choose a vocation or job based on the degree of success in his courses of studies; he will work towards vocational development and self enrichment; he will be happy in personal and professional life and will be useful to fellow members of his society.

Wrong decisions are taken and wrong choices made owing to lack of required knowledge, appropriate information or timely advice. Thus guidance in education refers to the process of presenting knowledge, information and/or suggestions to individuals or groups in a structured way so as to provide sufficient material upon which they may base choices or decision.

Now let us focus our attention on the areas of guidance need. In other words, areas in the career of the learner where he is in need of guidance.

Orientation

There are, often, periods of transition in the educational career of the learner when he moves from one phase to another, from one setting to a new one - from pre-primary to primary; from primary to high school, from high school higher secondary from higher secondary to college and so on. The period of transition is often characterized by anticipation - a mixture of fear and pleasure, with some sadness of leaving behind known friends, teachers and environment and the security they offered. The purpose of orientation is "to help the learner feel emotionally secure in a new setting and to provide him with the information needed to be successful in that setting". Many children are capable of working through the process of transferring from one educational experience to another with little or no assistance. Orientation is to provide general help for all children involved and specific help for those who find change particularly stressful.

Educational Guidance

Another area, called educational guidance, covers educational measurement and testing and the way in which the results of such measurement are preserved and filled in some form of educational record system.

Testing has no purpose apart from people; tests are used to help people to solve problems and to make decision, and they provide one source of information for this purpose. Unless you know what you need to decide, there is no point in giving a test. No measurement is useful by itself, but only when used in relation to other relevant data.

Tests can be used in education for selection, classification or streaming. Tests may also be used for diagnosis, for research purpose and for the evaluation of individuals or groups, perhaps at the end of the courses to determine whether or not it was worthwhile, in term of its objectives.

There are several purposes for which tests may provide information and there are different kinds of tests, which may be used. These may be divided broadly into four categories: ability tests, inventories, rating scales and projective techniques.

An ability test requires a person to perform a task or answer a question to which there is usually right or wrong solution. Commonly accepted ability tests are tests of intelligence, aptitude and achievement, which are distinguished in terms of function rather than content. Aptitude and intelligence tests are predictive measures of intellectual capacity. An intelligence test usually gives a general prediction about overall intellectual capacity, whereas an aptitude test may provide a measure in a specific area. An achievement test is designed to test past performance and usually measures a specific kind of content.

The test which forms an inventory does not have right or wrong answers, the person being tested being required to give some information about himself, about his interests, values and personality dimensions.

In an inventory the person gives information about himself; In a rating scale some one else gives information about him, or he rates himself.

Projective techniques are also used in an attempt to assess personality. They have not been demonstrated to be as valid or reliable as other types of tests, but only people with exceptional skills can use projective techniques very successfully.

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The best rationale for using testing in education is that despite the pitfalls there is no better way to get the information upon which to base the decisions which people consider important. Most criticisms of testing do not seem justifiable when the testing is done and the information is used with a sense of responsibility.

Teachers who are assigned to the task of Guidance are to be trained in testing and measurement to make sure that administration of tests, the interpretation of their results and use made of the information provided are all characterized by a responsible and ethical approach.

Another area can be labeled course choice, vocational and higher educational choice. If boys and girls in school are to move from the former choice between arts and science subjects to the wider range of subjects now available in many schools, it seems reasonable to make provision for some kind of assistance for those who feel a need to make their choices on a sound basis. The same approach is also relevant to the vocational choices made by school leavers. For many it is no longer a choice of whether to go for higher education or not, but a more multidimensional choice involving the important question, "which of the several kinds of higher education now courses available suits me best?"

Child growth and development follow certain patterns and from these we know certain achievements are likely to be learned at certain stages in a child's life. Decisions are more reasonally made at one level than at another, but there are individual differences in reaching that level. Some children can make a vocational choice and some not until their early or middle twenties, but circumstances do not readily permit that people delay their

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vocational choice until they are 'ready' in developmental terms. Choice making is a part of personality; we make choices in the light of our needs and temperament, but we need resourceful assistence in the form of Guidance.

Three major types of guidance can be easily identified – personal, educational and vocational. Personal guidance is offered when one is confronted with a personal problem on how to deal with a frustrating or conflicting situation in one's personal life.

Educational guidance is offered in terms of assistance in making a course in accordance with one's needs, interests, and aptitude and personality dimensions.

Vocational guidance is offered in terms of assistance in making a vocational choice on the basis of academic achievement, aptitude and personality.

These three types of guidance are closely inter-related. Guidance is general; Counselling is specific.

In any educational institution we find students unable to take a decision for a variety of reasons. They find themselves in a temporary state of indecision, confusion or distress. They seek specific assistance from some person who is willing to interact with them in order that they may resolve their confusion or cope with their distress. This meaningful, purposeful goal oriented interaction is called counselling.

Counselling is an integral part of guidance in the sense that it usually provides a more personal, individualized kind of help which is complementary to other guidance activities.

Counsellor is one who uses interpersonal skills to help a student resolve those practical difficulties, which arise from his particular development problems.

Counselling is an accepting, trusting and safe relationship between a counsellor and one or more clients.

The counsellor tries to understand each client's perception of himself (self perception), perception of his problem, perception of others (people around him) and perception of the situation in which he is placed or in which he has placed himself.

The counsellor tries to look at the counsellor in three different ways – as he really is; as he sees himself and as he can become. Self perception, if it is correct, will be a bridge between being and becoming. Self perception, if it is incorrect and inaccurate, will be a barrier between being and becoming. Correctness and accuracy in self perceptions is, of course, a relative term. Still the more 'accurate and correct' one's self perception, the more likely is one to become oneself. The function of the counsellor, in short, is to make one's self-perception a means to one's self- actualization.

The two basic elements in the process of counselling are the counsellee and the counsellor.

The counsellee is the person being counselled; he is, of course the centre of the counselling process. He is seeking self-realization, self- actualization; he is hoping to make his life more complete and satisfying. The basic assumption is that he has the innate capacity to perform this task.

The counsellor is the next element in the situation. His personality and adjustment, his constantly more adequate understanding of the counsellee, his feelings about him, his skills in seeing the resources for growth within the person seeking help- are his assets. If he has learned to live with himself and accept himself he is more likely to accept other persons. If he is

emotionally mature and fairly secure in his social and professional relations, he will be able to convey a sense of confidence to the counsellee. If he has faced conflicts in his life and worked through them, he will be able to help a less mature or less experienced person; he will acknowledge the validity of another way of life.

One of the unique characteristics of an effective counsellor is his ability to listen, to focus his attention on his client's needs, to exhibit genuine caring and at the same time to maintain healthy separateness. The counsellor encourages the counsellee to think through his problems and develop his self-concept. He listens to his client as though nothing else in this world were more important to him.

There are certain characteristics, which make a counsellor play his role effectively. The first one is empathy – feeling with 'others' or putting oneself in another's shoes and looking at things from his point view or frame of reference. This means that an effective counsellor places himself in the socio-psychological field of counsellee.

The second one is respect – respect for the individuality, the personality, the unique mode of coping or defense (adjustment) of the counsellee. Carl Rogers uses the term, 'unconditional positive regard' – positive regard for the counsellee with no conditions attached and exhibiting non possessive warmth; the counsellor is to be warm, cordial and friendly towards the counsellee but at the sometime he should not try to possess his client.

The third characteristic 'Genuineness' refers to the degree to which to counsellor can reflect his true feelings; the counsellor must possess a high degree of integrity and honesty.

The fourth characteristic 'Concreteness' refers to a precise complete response to specific feelings and experiences of the counselee

Counselling is not philosophizing or advertising or sermonizing but it is suggesting a practical and concrete measure to solve one;s problem..

Effective counselling skills and characteristics cannot be achieved overnight. The process of acquiring these skills and characteristics is laborious, time consuming and taxing but the results will be rewarding - a sense of achievement and fulfillment in providing counselling to hundreds or thousands of learners.

Now a final word –

Education aims at harmonious development of the personality of the learner. In other words, students must discover their talents and potentialities, develop them, make the best use of them and in so doing reach self- actualization. Thus it is evident the aim of education cannot be realised without an effective programme of guidance and counselling. Further an effective programme of guidance and counselling will contain problems related to student indiscipline and regenerate and rejuvenate a student population with a sense of values, sense of commitment and a spirit of dedication to social cause.

Questions:

1. What is meant by Guidance? (in about 75 words).

2. What are the sequential phases of guidance? (in about 75 words).

3. Briefly explain the process of educational guidance. (in about 300 words)

4. What is meant by vocational guidance? In what way is it

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related to and different from educational guidance? (in about 300 words).

5. What is meant by personal guidance? (in about 150 words).

6. What is Counselling? In what way is it different from and related to guidance? (in about 150 words).

7. Identify the characteristics of an effective counsellor (in about 300 words)

8. How do guidance and counselling facilitate self-actualization in students ?

Ps..

      Our schools and colleges need student Counsellors Resourceful and dedicated teachers who are willing to help the student population in personal academic and professional guidance and counseling are to be identified and oriented for this service   In fact every educational institution, today , is in need of a team of well trained student counselors who will work together and coordinate the development of the student population.

CHAPTER 30
PSYCHOANALYSIS
(The House That Freud Built)

Content outline: Psychoanalysis – Meaning – Freud's concepts on basic urges – elements of personality – Levels of consciousness – 'ego' defences – Treatment – Free association and dream analysis – Psychoanalysis and Religion – Freudeans – Adler's individual psychology – Jung's Analytical psychology – Neo-Freudeans – Psychoanalysis in counselling.

Psychoanalysis is a school psychology (method of studying human behaviour) – a study of dynamic, psychic determinants of human behaviour, and the importance of childhood experiences in moulding adult personality: it is a specified technique for investigating the unconscious mental activities: it is also a method of interpreting mental disorders.

Freud identified Eros (constructive life urges) and Thanatos (destructive death urges) as dynamics of behaviour. Death urges injure, destroy and will manifest in hate, aggression, murder and suicide. Life urges are either ego drives (meeting organic needs of nutrition and self preservation) or sex drives (pleasurable and affectional pursuits). There are cases of ambivalence (love and hate for the same person). Poetry, religion, music, art, work and vigorous exercises are some common methods of sexual sublimation. Bottled up, hostile or aggressive energy finds outlet in similar ways - Digging in a garden, chopping wood, going hunting and the like. Sex drives operating under the principle of pleasure – tendencies to avoid pain and seek pleasure are largely manifest in childhood. As the child matures into adulthood through adolescence it accommodates itself to the principle of reality

(Voice of reason, temporary denial of immediate pleasure to avoid subsequent pain-ego drives and its goal to adopt to the moral, social and physical requirements).

According to Freud personality consists of three elements – the id, the ego and the super ego. In the structure of the unconscious mind, source of the id can be construed as the inborn tendencies, the instincts uncontrolled, the unconscious striving of the human organism to live and enjoy life. The pleasure seeking id does not distinguish between good and evil; it is illogical; it holds contradictory wishes and impulses at the same time; it is unrealistic. The human organism which responds solely to its whims, its sexual and aggressive tendencies will not probably last long. The ego represents the conscious self. Through ego, the id is kept in touch with reality. The ego acts in terms of reality principle, which is the characteristic of adult behaviour. The ego is almost the whole of the conscious mind and it is the seat of higher faculties of the mind. A large part of ego is submerged in the conscious mind. The ego can learn by experience; it can interpose thought between wish and act; it unifies, modifies and integrates thoughts, feelings and it can be reasonable. The super ego has two layers – ego ideal and conscience. The ego ideal is the inner voice which encourages doing good things whenever one feels like doing them. The conscience is the voice, which discourages doing bad things whenever one feels like doing them – the voice in us that warns us against temptation and wrong doing. But the voice we hear is only the conscious part of the super ego. A large part of it is buried in the unconscious, where it frequently bullies the ego and makes itself felt in vague and distressing feelings of guilt and shame. The ego must mediate between id and super ego; it must

control the whimsical demands of id; it must satisfy the needs of the external reality. It must adopt compromises - subtle means of self-protection called 'ego-defences'. When the ego is under stress from id or being punished by super ego the individual suffers from anxiety. The anxiety may appear itself as feelings of tension, guilt, inferiority or even physical symptoms. Freud identified three levels of consciousness – conscious, preconscious and unconscious. He compares human mind to an iceberg floating in water. The conscious level refers to that layer visible over the surface. The preconscious is the next level under the surface which periodically comes up and goes down. The unconscious level which constitutes the major part floats always under the surface of water, never visible over the surface. The conscious level refers to those mental events and memories that the person is aware of at the moment. The preconscious is the storehouse of surface memories and desires that are not conscious of the moment but are readily recallable. The unconscious is the deposit of buried thoughts, emotions and impulses and unfulfilled wishes that are not readily accessible to voluntary control. It is the under world of personality that is not concerned with reality or the rules and regulations of society. Like the turbulent and muddy undercurrents of a deep river, the unconcious exerts profound effect on the composition of the clearer water above. The presence of the unconscious is revealed by embarrassing slips of tongue, thinly disguised phantasies and dreams, inner conflicts and neurotic symptoms.

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The following diagram* represents Freud's concept of the unconscious
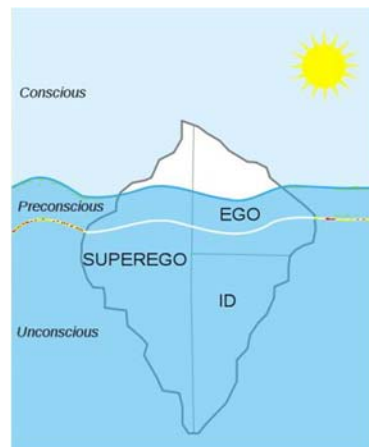
The id powers the human vehicle; the ego steers it on a safe course; the super ego insists the ego obey the traffic laws even when there is no chance that the violation will be caught or punished. In other words, the id is the engine or driving power; the ego is the driver keeping the vehicle on the road; the superego is the back seater, owner of the vehicle who abides by rules and regulations.

Freud employed two methods of treatment for mental disorders – Free association and Dream analysis. Free association refers to the spontaneous reporting of random thoughts in disconnected form; objective is to identify those unconscious drives, impulses and motives that are likely to cause mental illhealth and deal them resourcefully.

Dreams mirror unconscious conflicts and express repressed wishes, according to Freud. During sleep ego is less vigilant and the repressed wishes surface in the form of dreams . However since vigilance is not completely relaxed the dream content is disguised

The process of identifying actual content of dreams from their apparent contact is Dream Analysis. Free Association and Dream Analysis can be effectively employed only by efficient and resourceful psychiatrists.

There is a striking similarity between Psycholoanalysis and Religion. According psycholoanalysis man is , by nature, bad and must be educated to be good. There is the usual conflict of the good or the super ego and the evil or the id with ego torn between them. The evil means the lust or libido; self love or narcissism and hate or aggression. The psychoanalyst is the high priest, the ancient interpreter of dreams; finally salvation is attained through ritualistic confession, or catharsis.

Adler and Jung were the two well known Freudeans. Later they had theoretical conflicts with Freud and developed their own theories - modified and refined versions of psychoanalysis.

Adler's theory was called 'individual psychology'. He observed that the principal motive force was not libido (of Freud) but a struggle for superiority and power. This masculine protest, according to him, is characterised by a needlessly domineering attitude towards the opposite sex. The universal striving for superiority is essentially compensation for basic feelings of inferiority and insecurity that are traceable to the early environment and physical constitution of the individual. Incompetent people are usually aggressive and arrogant (negative compensation). According to Adler early in life by the fifth year, the child creates for himself a fairly permanent style of life,designed to overcome his feeling of inferiority and assure success in the three fundamental challenges of life: adjustment to society, vocation and love. Treatment of the individual with personal difficulties will be direct and simple – no investigation of the unconscious but reeducating and socializing the individual to restore his self- confidence through physician – patient relationship, benevolent comradeship. While Freuden technique is

more effective in medical field, Adlerean technique is more effective in the field of education.

The theory of Jung was called Analytical psychology. It is a mixture of keen empirical observation, mysticism and religion. He retained many of the orthodox principles including the concept of the unconscious, the role of repression in the production of neuroses and the use of Free association and Dream analysis in treatment. He desexualized libido. According to him libido is the life energy which at one time, expresses itself in the pursuit of sensual pleasure and at another time in the striving for superiority, artistic creation, play and other activities.

He classifies individuals into two major types in terms of social interaction introverts and extroverts. An introvert is inwardly reflective, reserved, unsocial, negative, conservative, socially illadapted, introspective, more self-centred and finds greater satisfaction in the quest for power and prestige. An extrovert is outwardly expressive, positive, socially effective, progressive, with interest outside the self, is more likely to be guided by the principle of pleasure. He coined a new term – collective unconscious or racial unconscious–to supplement and complement the concept of Freudean unconscious Every civilized human being, whatever his conscious development, is still archaic at the deeper levels of his psycho. Just as the human body connects us with mammals and displays numerous relics of early evolutionary stages, so the human psyche is likewise a product of evolution which when followed to its origins shows countless archaic traits. The unconscious is not the black world of lust, savagery and perversion. That the unconscious is primitive does not make it a wild beast. From the moral point of view it is perfectly neutral. In terms of Analytical psychology, it is a balanced mixture of id and super ego.

Neo–Freudeans (Sullivan, Karen Horney, Erich Fromm and Erik Erikson) revised Freudean theory. They reexamined the

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aspects of human development from birth to maturity and interpreted them differently. They de-emphasised Freud's reliance on libido and placed greater emphasis on the role of society and culture in shaping human personality.

Psychoanalysis is employed in counselling when appropriate. When confronted with problems, teachers and students often resort to defensive behaviour (instead of coping behaviour). An analysis of the defense mechanisms will help the counsellor identify the unconscious drives and motives of the counsellee that disturb his mental health. Psycho analysis will also help us identify the causes of frustration, the nature of stress and the type of conflict that affect the mental health of the individual. When cases are rather complex, free association and dream analysis will be useful if employed by efficient and resourceful psychiatrists.

Questions:

1. What is meant by psychoanalysis? (in about 75 words).

2. Briefly explain Freud's concept on basic human urges. (in about 75 words).

3. What are the three elements of human personality according to Freud? In what way are they related to one another? (in about 75 words).

4. Identify the three levels of consciousness as expounded in Freud's theory. To what extent are they related to one another? (in about 150 words).

5. What are 'ego' defences? When are they employed by individuals? (in about 150 words).

6. Briefly explain 'Free Association' and 'Dream Analysis' as methods of treating people with emotional disturbances. (in about 300 words).

7. In what way is psychoanalysis related to religion? (in about 75 words).

8. Attempt a critical estimate of Adler's individual psychology. In what way does it modify Freud's original theory? (in about 150 words).

9. Attempt a critical estimate of Jung's analytical psychology. In what way does it modify Freud's original theory? (in about 150 words).

10. How does psychoanalysis help the counsellor? (in about 75 words).

11. In what way did Neo-Freudeans differ from Freud? (in about 75 words).

12. Freud's theory was not perfect since it was based on case studies and hasty generalization but his earnestness, diligence, intellect and devotion to work were beyond question. His theory was refined and improved by complementary and supplementary theories of Alder, Jung and Neo-Freudeans'. Discuss. (in about 750 words).

Ps.

Freud's approach to human behaviour and subsequent treatment advocated by him are similar to a system of medical treatment, We need medical treatment only when we are ill (not when we are normal and healthy). Hence here is a note of caution: Let us not overuse Freudean approach (using it when it is not necessary) Let us employ it only when it is absolutely essential.

SECTION IX : MISCELLANY

M1 - PSYCHOLOGICAL DISORDERS AND
      THERAPIES

M2 - SOCIAL PSYCHOLOGY

M3 - POSITIVE PSYCHOLOGY

(These topics well enrich the knowledge base of the teacher educators so that their teaching of Psychology may become more effective, lively and useful to the student population.)

M1 - PSYCHOLOGICAL DISORDERS AND HERAPIES

Disorders

     Psychological disorders refers to behaviour atypical, disturbing, mal-adaptive and unjustifiable. A distinction is usually made between two broad categories of disorder : neuroses (singular : neurosis) and psychoses (singular : psychosis). Neuroses are relatively mild psychological problems that all of us occasionally experience. They are characterized by anxiety, an inability to cope effectively with challenges, and difficulty in interpersonal relationships. Neurotic people may experience a great deel of stress, but they can function fairly well in their environment. In contrast, Psychotics lose contact with reality ; they experience delusions, hallucinations and loss of control over their feelings and actions. Most of them are confined to mental hospitals.

Anxiety

     Anxiety is a part of everyday experience. It is classified as a psychological disorder only when it becomes distressing or pessistent or is characterized by maladaptive behaviours. Anxiety is a vague feeling that something bad is likely to happen (for no clear reason). Tension, restlessness, uneasiness, sleeplessness accompany anxiety. Cause cannot be identified and hence cannot be dealt with.

Panic

     It is a terrible attack of anxiety. The person feels that something terrible is likely to happen. Heart palpitation, shortness of breath, choking sensation, trembling, dizziness accompany panic.

Phobia

It is an irrational fear - being afraid of specific objects or situations. Social phobia refers to intense fear of being scrutinised by others. It is shyness taken to extreme ; people with social phobia avoid social situations.

Obsessive - compulsive disorder

It is characterized by persistent and repetitive thoughts and actions ; (e.g. checking whether the door is locked several times) the person is obsessed with senseless and offensive thoughts and compulsive rigid behaviour ; obsessive thoughts are so haunting ; and compulsive rituals are so time consuming senselessly that effective functioning gradually becomes impossible. Obsessions are characterized by repetitive thoughts. Compulsions are characterized by repetitive actions.

Mood disorders

They are caused by emotional extremes. Depressive disorder (Depression) refers to one with no hope for the future, dissatisfaction with the present, isolation from others, lethargy, feeling of worthlessness, lack of interest in people around and in daytoday activities. Depressed people tend to explain bad events that they are "stable" (it is going to last for ever) "global" (it is going to affect everything) and "internal" (it is all my fault).

This pessimistic, over generalised, self blaming, depressing sense of hopelessness is termed "blues". Manic disorder (mania) refers to overexcited hyperactive state. In Bipolar disorder (Manic Depressive disorder) the person alternates between depression and mania. He is in depressed mood for sometime (one or two months) and all of a sudden he goes to other extreme (hyperactive, overexcited, optimistic, over talkative, extremely happy, extroverted) and behaves like a maniac only to switch over to

depressed mood again after sometime (a month or two).

Schizophrenia

Depression is the common cold and schizophrenia is the cancer among psychological disorders. Schizophrenia refers to "split mind". It does not refer to multiple personality but to a split from reality. It is characterized by disorganized thinking and speech, distorted perceptions and inappropriate emotions and actions. There are a few major subtypes of schizophnenia.

Paranoid is characterized by symptoms of delusions (false beliefs), disturbed and distorted perceptions, hallucinations (sensory experiences without sensory stimulations, especially auditory) and persecution mania (people are against me). In disorganized subtype the speech and behaviour are disorganized accompanied by flat or inappropriate emotion. Catatonic is characterized by immobility or excessive parrot like repeating of another's speech or movements. In undifferentiated there are several and varied symptoms. In residual, the person always withdraws from others (after hallucinations and delusions have disappeared).

Personality disorders

They are maladaptive behaviours that impair people's social functioning (without anxiety, depression or delusions)

A person with histrionic personality disorder displays shallow, attention - getting emotions to gain other's praise and reassurance. A person with narcissistic (narcissism - self love) personality disorder exaggerates his own importance, aided by success fantasies ; he finds criticism hard to accept, often reacting with rage or shame. A person with borderline personality disorder has unstable identity, unstable relationships and unstable emotions. The most serious type of personality disorder is antisocial

personality disorder (also called psychopath or sociopath). It is a social menace. A psychopath has no conscience for wrong doing, even towards close relatives and friends ; he is aggressive and ruthless. Psychopaths (or sociopaths) are not born (though there seems to be some genetic influence) but they are made by circumstances,-social inequalites, imbalances, prejudices, disparities and so on.

If potential antisocial elements are identified at an early stage, they can be educated and socialized and kept away from other (more aggressive and violent) antisocial elements. Antisocial personality disorder is a universal problem. Every nation (or culture) devises its own way of dealing with the problem. Social psychologists suggest various measures based on their research.

Therapies

To treat all psychological disorders, most mental health workers, today, follow a biopsychosocial perspective. They assume that these disorders are influenced by genetic predisposition, physiological states, psychological dynamics and social circumstances - interaction of nature (physiological factors) and nurture (past and present experiences).

Bio - medical (Somatic) therapies

The most widely used bio - medical treatments today are the drug therapies. The discoveries in psycho - pharmacology (the study of the effects of drugs on mind and behaviour) have contributed to the treatment of people with psychological disorders reducing largely the need for psycho surgery or hospitalization. In Drug therapies the oft - used drugs are anti psychotic, anti anxiety and antidepressant drugs.

Electro shock therapy or Electro convulsive therapy (ECT) is one in which mild electric current is sent through the brain of an anesthetized patient. ECT is an effective, last - resort treatment for many people with severe depression who have not responded to drug therapy. Magnetic brain stimulation is a recent alternative.

Pscho surgery refers to removal or destroyal of particular brain tissues in order to change behaviour. Lobotomy (a surgery to calm uncontrollably emotional or violent patients) was once popular. Now it is a treatment of the last resort.

Behaviour therapies

They employ application of principles of learning to eliminate undesirable behaviour. They do not look for causes (below surface). According to them maladaptive symptoms are learned behaviours to be replaced by desirable behaviours. Principles of operant conditioning will be applied by providing positive, renforcement for desirable, acceptable adaptive behaviours. To break bad habits aversive conditioning will be employed (something unpleasant will follow undesirable behaviour - for example a nauseating sensation on smoking a cigarette). To get rid of phobias exposure therapy will be employed. It implies deliberately exposing the persons to the very objects or situations that they are (irrationally) afraid of and convincing them of their "irrationality". In systematic "desensitisation" persons are desensitized of their phobias gradually, systematically and step by step. For example if some one is afraid of mouses, he gets exposed to pictures of mouses, to mouse toys, real mouses (said to be mouse toys) and real mouses. Here his phobia is gradually, systematically densensitized.

Cognitive therapies

According to cognitive therapists, our thinking colours our feelings. Between the event and the response lies the mind. For

example, a person with depression interprets suggestion as criticism, disagreement as dislike, praise as flattery and friendliness as pity. Teach them new positive ways of thinking. Help depressed people take off their dark glasses and help them identify their irrationalities.

Cognitive therapists employ techniques which help people in decolouring their coloured perception and in surmounting barriers that distort their thinking and reasoning.

Cognitive - behaviour therapy combines cognitive treatment (changing self - defeating thinking) with behaviour treatment (changing behaviour).

Psycho analytic therapies

In psycho analytic therapies, treatment is based on childhood's residue of repressed impulses and conflicts. Free association expects the patient to go on talking about whatever comes to his mind (without censoring anything) - his unintentional pauses - blocks to flow - resistance are interpreted for case analysis. In dream analysis the apparent manifest content of the dream is uncovered to discover the actual latent content which reveals his inner conflicts. Psycho analytic treatment is time consuming and can be given only by trained and experienced psychiatrists. Modern psycho dynamic therapy replaces "psycho analysis" by Interpersonal therapy (Face to Face therapy) focussing on current relationships.

Humanistic therapies

Humanistic therapies attempt to boost self - fulfilment through self - awareness and self - acceptance. They focus on the present and the future (not on the past), conscious thoughts (not unconscious impulses), immediate responsibility for one's feelings and actions (rather than uncovering hidden determinants)

promoting growth rather than curing illness. Persons who come for therapy are called clients (not patients).

The therapy is called non - directed therapy (or client - centred therapy) since the therapists do not impose their thoughts and ideas on the clients. Therapists exhibit genuineness, acceptance, empathy and unconditional positive regard. A salient feature of the therapy is "active listening" (echoing, restating, seeking clarification, reflecting thoughts and feelings) to the clients. Humanistic therapies are more counselling sittings rather than treatment sessions.

Group therapies

They provide opportunities for individuals to study themselves and analyse their own behaviours by interacting with others with similar problems. They also learn, incidentally, ways and means of dealing with their own problems and disorders. Encounter groups may help psychologically healthy (normal) people assess themselves by interacting with fellow - members of the groups. Defences will be got rid of and communication barriers, gradually, will be surmounted. Family therapy is a special kind of group therapy where couples or parents and their children can learn more effective ways of relating to one another. The so - called problem children or the so - called problem parents or the so - called problem - siblings or the so - called problem - relatives will interact with one another, break communication barriers and open up new ways of maintaining conducive emotional home climate for healthy interpersonal relationship.

Finale

The line of demarcation between psychological order (normal behaviour) and psychological disorder (abnormal behaviour) is rather thin. Most of us (normal people) occasionally

behave in an abnormal way. We must be very careful and objective in identifying behaviours which indicate psychological disorders. Once identified, such persons are to be directed for appropriate therapies. There is nothing wrong in seeking psychiatric help. It is similar to going to a medical doctor when we get physically indisposed

Therapies outlined so far view psychological disorders from their own perspectives - approaches. These approaches are not contradictory but complementary. There are cases when two or more therapies are integrated and applied along with medical therapies. Modern approach is eclectic (blend of the best). Our ultimate objective is to help people come out of their disorders and lead a normal life. Treatment of symptoms moved towards treatment of disorders which, inturn, moved towards treatment of persons. Therapists, today, have regard for their clients as fellow human beings and they consider treatment as social obligation and they are proud of this social service.

M2 - SOCIAL PSYCHOLOGY

Social Psychology is the scientific study of how we think about, influence and relate to one another.

How we think about one another

People usually attribute other's behaviours either to their internal dispositions or to their external situations. This is what is called Attribution Theory. You may, for example, wonder whether a person's hostility reflects an aggressive personality (a dispostitional attribution) or whether he is reacting to stress or abuse (a situational attribution). The tendency for observers, when analysing another's behaviour, to underestimate the impact of the situation and over estimate the impact of personal disposition is called fundamental attribution error. People attribute their own hostile behaviour to situations and to others' personal dispositions. Our attributions are consequential.

Attitudes are beliefs and feelings that predispose our reactions to objects, people and events. If we believe someone is mean, we may dislike the person and act in an unfriendly way. Attitudes will affect behaviour under certain circumstances - when other influences are not strong, when our attitude is specific to behaviour and when we are aware of our attitudes. Attitudes affect actions and actions affect attitudes.

Co-operative actions, such as those performed by people on sports teams, facilitate mutual liking. Such attitudes, in turn, promote positive behaviour. Role playing affects attitudes when you a adopt a new role. When you become a student, a teacher, an administrator, a spouse you try to follow social prescriptions. At first you do not feel at home with your new behaviour because you are acting the role. Gradually you start feeling at home with your

new role. What began as play acting in the theatre of life becomes you. There are times when our attitudes and actions do not concide, we experience tension. This is called cognitive disonance (when two of our thoughts are inconsistent). We reduce tension by changing our attitudes.

How we influence one another

Conformity is adjusting one's behaviour or thinking to coincide with a group standard. You are likely to conform to your group standard, if you feel incompetent and insecure ; if your group is unanimous in its decision ; if you admire your group's status ; if you have no prior commitment to any other response ; if you feel you are observed by others in the group ; if your culture strongly encourages respect for social standards. Suggestibility is a subtle type of conformity.

We believe what others believe. It is to avoid social rejection or to gain social approval. We are sensitive to social norms - rules and regulations for acceptable and expected behaviour - because being different may result in social rejection. This is called normative social influence. Respecting social norms is not the only reason for conformity. The group may provide valuable information. When we accept others' opinion. we are responding to informational social influence. Our view of social influence as good or bad depends upon our individual values.

We usually improve our performance in the presence of others. It is called social facilitation. However it is related to simple well learned tasks only, not with tasks that are difficult or yet to be mastered. What you do well, you are likely to do even better in front of an audience - especially a friendly one. What you usually find difficult may seem almost impossible when you are being watched.

The tendency of people in a group to exert less effort when pooling their efforts towards attaining a common goal than when individually accountable is called social loafing. People acting as a part of a group feel less accountable and therefore worry less about what others think. They may view their contribution as dispensable. If the members of the group share equally in the group's benefits regardless of how much they contribute, several may put forth less efforts. Unless highly motivated and identified with their group, they may "free – ride" on the other members of the group.

The presence of others can arouse people to optimum performance (social facilitation) or can diminish their feelings of responsibility (social loafing). However sometimes the presence of others arouses people as well as diminishers their responsibility. The result can be uninhibited behaviour abandoning normal restraints. This is termed deindividuation. To be deindividuated is to be less self - conscious and less restrained in a group situation when group participation makes people aroused and anonymous. When you are a member of a striking group - agitating group you do not behave like yourself you merge yourself in "crowd behaviour" and become part of "mob fury" ; you are deindividuated.

Group interaction can have good as well as bad effects. The enhancement of a group's prevailing attitudes through discussion within the group is called group polarization. If a group is like minded, discussion strengthens its prevailing opinions. If the group is positive, it becomes more positive after discussion and if the group is negative it becomes more negative after discussion.

Does group interaction ever distort important decisions?.

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Groupthink is a mode of thinking that occurs when the desire for harmony in a decision making group overrides a realistic appraisal of alternatives. To preserve the goal - group feeling, any dissenting view is suppressed or selfcensored, especially when the leader voices his enthusiasm for a scheme.

In affirming the power of social influence, we must not overlook our power as individuals. Social influence and individual influence interact. There are times when even ordinary individuals assert their sense of freedom by doing the exact opposite of what is expected of them when pressurised to do something they do not feel like doing. The powers of social influence are enormous ; so are the powers of committed individuals (Dedicated leaders in every field).

How we relate to one another

Negative factors (Prejudice, Aggression, Conflict)

Prejudice means prejudgement. It is unjustifiale and usually negative attitude towards a group - often a different cultural, ethnic or gender group ; like all attitudes prejudice is a mixture of beliefs (often overgeneralized and called stereotypes), emotions (hostility, envy, fear) and predispositions to action (to discriminate). Like other forms of prejudgement prejudices influence how we perceive people and events.

Why does prejudice arise? Inequalities, social divisions, and emotional scapegoating are partly responsible. When some people have money, power, and prestige and other do not have any, the "haves" usually develop attitude that justify their status - perceiving "have-nots" as lazy, ignorant and irresponsible - the very traits that justify their low socio - economic status. Prejudice rationalizes inequalities. Discrimination also increases prejudice through reaction it provokes in its victims.

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The social definition of who you are also implies who you are not. Mentally drawing a circle that defines 'us' (we - the in group) excludes 'them' (they - the outgroup). Such group identifications typically promote an ingroup bias - favouring one's own group (and not favouring the other group).

The most destructive force in our social relations is aggression ; it is any physical or verbal behaviour intended to hurt or destroy - whether done reactively out of hostility or proactively as a calculated means to an end. Aggressive behaviour, like all behaviour, is a product of Nature and Nurture.

Although suffering sometimes builds character, it may also bring out the worst in us. Being blocked short of a goal also increases people's readiness to aggress. This phenomenon is called frustration - aggression. Frustration generates anger which, inturn, leads to aggression especially in the presence of another aggressive person. Like frustration, other aversive stimuli - physical pain, personal insults, foul odours, hot temperature, cigarrette smoke and the like provoke aggression.

Conflict is a seemingly incompatibility of actions, goals or ideas. The elements of conflict are much the same at all levels, from nations at war to cultural disputes in a society, to individuals. In each situation people become enmeshed in a potentially destructive social process that can produce results no one wants - pursuit of self - interest and distorted perception of the other party play havoc with efforts of resolving conflicts.

Positive factors (Love, Help, Peace)

Mutual attraction is the first phase of Love. Proximity, appearance and similarity, in most cases, facilitate mutual attraction (liking for each other). Occasionally men and women move from initial attraction to subsequent friendship to the more

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myterious state of romantic love and a more enduring companionate love (love - a deep affectionate attachment facilitated by equity (mutually sharing self and possessions, emotional support, care for each others' welfare) and intimacy (self - disclosure). Arousal is the key ingredient of passionate love. The thrill of romance, the giddy "floating on a cloud" feeling gradually fades (Love makes Time pass and Time makes Love pass).

Social Psychologists study not only the romantic love between men and women but love and affection shown by people (Men or Women or Men and Women) to people. Love is a force why we relate to one another positively.

Why do we help others? One view is that self - interest underlies all human interactions. Our goal is to maximise benefits and minimise efforts. This is called social exchange theory.

If you think of offering help, you may weigh the efforts (time discomfort, anxiety, financial commitment) against benefits (reduced guilt, social approval and good feelings). Social expectations also influence helping - prescribing how we ought to behave, often to our mutual benefit. We learn, through socialization, reciprocity norm, the expectation that we should return help, not harm, to those who have helped us. We help people inferior to us in image or status (socio - economic, intellectual) based on social responsibility norm. We should help people who need help even if there are no "benefits". Above all we help others because we feel like helping others (intrinsic motivation), since we cherish and practise basic human values.

How can we make Peace? Co-operation, communication and conciliation can, in some cases, transform the antagonism fed by prejudice, aggression and conflict into attitudes that promote

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peace. When conflicting parties are non - competitive and of equal status co-operation helps them come into close contact and it facilitates peace. People are usually distrustful and pursue their individual interests as a defence against exploitation. When they are allowed to discuss the dilemma and negotiate, co-operation increases (because of communication). When each party voices its viewpoint and to understand others, competition is replaced by co-operation through communication.

When tension and suspicion peak, co-operation and communication become impossible. Each party is likely to threaten, coerce and retaliate. Here is a case for conciliation. One side first announces its recognition of mutual interest and its willingness to reduce tensions. It thus initiates one or two preliminary conciliatory acts. This modest beginning opens the door for reciprocation by the other party. Even during intense personal conflict, when communication has been lacking, a small conciliatory gesture - a smile, a touch, a word of apology may work. Concilliations allow both the parties to begin to ease tension and reach a stage where communication for mutual understanding is feasible.

Finale

Social Psychologists of the day focus their attention on those socio - psychological forces and influences which facilitate basic human values and virtues so that people of the world can live in peace and harmony.

M3 - POSITIVE PSYCHOLOGY

Emergence of a Positive approach

The positive Humanistic perspective of human behaviour advocated by Abraham Maslow and Carl Rogers was a revolt against the negative approach of Psychoanalysis. They emphasized growth potential of healthy people. Maslow's self - actualization and Rogers' self – concept Roger's 'Self – Concept' were strikingly original and positive. These two concepts became popular in the field of psychology. Maslow was the most cited psychologist in the field of Motivation and Rogers in Counselling. However their impact   on psychological theory and research started fading gradually. What was said of Freud was also said of them. According to Critics their concepts were vague and subjective.

They formed these concepts not on scientific lines or objectively. Maslow's concept of self - actualization was, according to them, a projection of his personal values and ideals. The characteristics of self - actualized persons (as portrayed by Maslow) were merely those of people of his choice of highly motivated people. It was purely a subjective choice according to critics. The individualism encouraged by Humanistic Psychology (trusting and acting on one's feelings, being true to oneself, fulfilling oneself) can lead to self - indulgence, selfishness, and an erosion of moral restraints.

Those who focus beyond themselves are most likely to experience social support, to enjoy life and to cope effectively with stress. So observed critics. The critics were opposed to the native optimism of Humanistic Psychology, "People are basically good ; everything will work out" and also to other dark despair, "It is

hopeless (overpopulation, global warming, nuclear threat) ; why try?"

According to them action requires enough realism to fuel concern and enough optimism to provide hope (Humanistic psychology encourages the needed hope but not the equally necessary realism about evil). Are people basically good really? Though Rogers held toxic cultural influences responsible, the basic question is 'who makes up culture?" - only people like you and me. These reactions to Humanistic Psychology led to the emergence of Positive psychology. What Neo - Freudeans did to Psycho analysis was done by Positive Psychologists to Humanistic Psychology. Positive Psychology complemented and supplemented the Humanistic approach to Psychology.

Positive Psychology

It is a current movement in psychology advocated by Christopher Peterson and Martin seligman. It is concerned more with human strengths and virtures than with weaknesses and damages. It is a scientific study of optimal human functioning. It aims to discover and promote strengths and virtues that enable individuals and communities to thrive. Positive psychology shares with humanistic psychology an interest in advancing human fulfilment, but its origins and methodology are scientific. It is a 'humane, scientific monument' (seligman). Psychology now focusses on Happiness and Health (in addition to earlier themes) - a shift in emphasis from learned helplessness and depression to optimism and thriving.

To encounter DSM - (a manual on mental disorders), Positive Psychologists structured a manual on values and strengths - The Values in Action (VIA). It provides six clusters. The six clusters are : (i) Wisdom and knowledge ; (curiosity ; love of

learning ; critical judgement and open mindedness ; creativity ; perspective ; (wisdom)**)**. (ii) Courage **(**bravery / valour ; industry and perspective integrity and honesty ; vitality (zest and enthusiasm)**)**. (iii) Love **(**kindness ; intimate attachment ; social intelligence**)** (iv) Justice **(**citizenship and team work ; fairness and equity ; leadership**)** (v) Temperance **(**humility ; self control ; prudence and caution ; forgiveness and mercy**)** (vi) Transcendence **(**appreciation of beauty, awe / wonder ; gratitude; hope and optimism ; playfulness and humour ; spirituality and purpose**)**.

The first pillar of positive psychology is positive subjective well being indicated by satisfaction with the past, happiness with the present, and optimism about the future. The second pillar, positive character focusses on exploring and enhancing virtues. The third pillar - positive groups, communities and culture seeks to foster a positive social ecology including healthy families, communal neighbourhoods, effective schools, socially responsible media and civil dialogue.

Psychology will have a more positive mission today. In addition to repairing damage and curing disease, the aim of positive psychology is to measure, understand and then build the human strengths and civic virtures. Can Psychology meet the challenge of shaping a world marked by Peace and Happiness?.

Ps.

The approach of Positive Psychology is that Psychology must be useful to Society – to the entire humanity. Psychologists who belong to this school of thought explore ways and means of employing Psychological processes to the advancement of Humanity – to ensure . Peace and Happiness in the entire world. Teacher educators (especially those who teach ' Educational Psychology' to the teacher – trainees) must leave no store unturned in highlighting the positive aspects of Psychology or on techniques of how to make Psychology more positive.

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