UNIT ONE

PSYCHOLOGY: MEANING AND DEFINITIONS

The word Psychology has its origin from two Greek words 'Psyche' and 'Logos', 'psyche' means 'soul' and 'logos' means 'study'. Thus literally, Psychology means 'the study of soul' or 'science of soul'.

Psychology as the Science of Soul.

In ancient days, the Greek philosophers like Plato and Aristotle interpreted Psychology as the science of the soul and studied it as a branch of Philosophy. According to earlier psychologists, the function of psychology was to study the nature, origin and destiny of the human soul. But soul is something metaphysical. It cannot be seen, observed and touched. We cannot make scientific experiments on soul. What is soul? How can it be studied? So, this definition was rejected.

Psychology as the Science of the Mind:

It was the German philosopher Emmanuel Kant who defined Psychology as the science of the mind. William James (1892) defined psychology as the science of mental processes. But the word 'mind' is also quite ambiguous as there was confusion regarding the nature and functions of mind. What is mind? How can it be studied? So, this definition was also rejected.

Psychology as the Science of Consciousness:

Modern psychologists defined psychology as the "Science of Consciousness". James Sully (1884) defined psychology as the "Science of the Inner World". Wilhelm Wundt (1892) defined psychology as the science which studies the "internal experiences'. But there are three levels of consciousness – conscious, subconscious and the unconscious and so this definition also was not accepted by some.

Psychology as the Science of Behaviour:

At the beginning of the 20th century, when psychologists attempted to develop psychology into a pure science, it came to be defined as the science of behaviour. The term behaviour was popularized by J.B. Watson. According to R.S. Woodworth, "First Psychology lost its soul, then it lost its mind, then lost its consciousness. It still has behaviour of a sort. Now Psychology is considered as a positive science of behaviour. According to Crow and Crow, "Psychology is the study of human behaviour and human relationship".

Scope of psychology

Psychology is the study human behaviour. It is the study the behaviour of man in a particular situation. Psychology is a science. It includes a lot of theories, facts and principles. It studies the cause-and-effect relationship. It is a behavioural science. Its methods are the scientific study of human behaviour in educational setting.

Scope of educational psychology

Learner

The main aim of education is harmonious and all-round development of the learner. It helps in deciding what learning experience are desirable at what stage of growth and development of learner. So that these experiences can be acquired with a greater ease and satisfaction.

Learning Process

It helps the teacher to get to know his potential to teach, and to know the abilities of the learner. It assist the teacher to identify the learner's learning process. It help to know the behaviour of the learner in relation to educational

environment and to know their knowledge, attitude, behaviour and ideas in learning.

Learning situation

It deals with the behaviour of the learner in educational situation to identify various psychological factors affecting the teaching and learning process. The elements of learning situation are instructor, learner, subject matter, teaching materials, teaching equipment and physical facilities.

Teaching Situation

It helps the teacher to consider themselves as a facilitator, guide and co-learner. Teacher's responsibility is to encourage students to take charge of their learning journey. To create situation for easy learning for the learner.

Teacher

Educational psychology helps to know the teacher's interest, expectation, positive attitude and patience with students.

Nature of educational psychology

- Educational Psychology is a branch of psychology it deals with problems of students faced in educational field.

- Educational Psychology is a natural science researching about human behaviour and why they alter.

- Educational psychology is a study of mind and behaviour of the learner in learning situation.

- Educational psychology is a scientific method to study the learner's behaviour by observation and investigation.

- Educational psychology always search the truth to study the behaviour of the learner in relation to his educational environment.

- Educational psychology comprises well organized systematic and relevant psychological laws and principles.

Growth and development

Life of an individual starts with his conception in the womb of his mother starting from a fertilized egg, he develops into a full-fledged being with a help of a process named as growth and development.

The term growth is used in purely physical sense. It generally refers to an increase in size, length, height and weight. As a result of growth changes takes place in the body and behaviour of the organism. Growth does not continue throughout life. It stops once maturity is attained. The changes produced by growth are the subject of measurement.

Development implies overall changes in shape, form or structure resulting in the improved working or functioning of the organism. Development is a continuous process. Development continue throughout the lifespan of the individual.

Growth	Development
Growth is the quantitative.	Development is the quality changes
Growth means increase in size, length, height and weight. The term growth is used in the physical sense.	Development implies over all changes.
Growth is one of the parts of developmental process.	Development is about the changes in the organism as a whole.

Growth does not continue throughout life. It is only up to the stage of maturity.	Development is a continuous process. It continues throughout life. It is from womb to tomb
Growth can easily be measured.	Development cannot be easily measured.
Growth may or may not bring development.	Development is possible without growth.

Stages of growth and development

Life span of human being can be divided into following stages

1. Pre-natal – from conception to birth.
2. Stage of infancy – from birth to two years.
3. Childhood stage – from three to twelve years.
4. Adolescent stage – from onset of puberty to the age of maturity.
5. Adulthood – from twenty years onwards.

Various aspects of growth and development

Various areas of growth and development are physical, intellectual, emotional, moral, social and language development.

Physical development

It include development of internal as well as external organs.

Intellectual development

It include development of intellectual abilities like sensation, perception, attention, concept formation, imagination, thinking, reasoning and problem solving.

Emotional development

It include development of positive emotions like joy, happiness, love and negative emotions like fear, anger, anxiety etc.,

Social development

It include development of social characters like cooperation, adjustment, sympathy and how to adjust with the society and respect social norms and rules.

Moral development

It include development of society's ethical and moral code and able to discriminate right and wrong, good and bad.

Language development

It include development of various language skill to communicate with other people.

Factors influencing growth and development

Growth and development of human beings is influenced by a variety of factors categorized broadly as internal and external factors.

Internal factors

All the factors within the individual are called internal factors

1. Heredity factors
2. Biological factors
3. Intelligence
4. Emotional factors

External factors

The factors lying outside the individual are called external factors.

1. Environment in the womb of mother
2. Environment available after birth
    a. Accidents and incidents in life.
    b. The quality of physical environment, medical care and nourishment.
    c. The quality of the facilities and opportunities provided by the social and cultural forces.
        i. Parental and family care
        ii. Economic and social status
        iii. The quality of neighborhood
        iv. The quality of peer group
        v. The quality of schooling

Principles of development

1. Principles of continuity

Development is a continuous process from birth to death.

2. Principle of lack of uniformity in the developmental rate

The rate of growth and development is not steady and uniform at all times.

3. Principle of individual differences

There exists wide individual differences among children with respect to their growth and development.

4. Principle of uniformity of pattern

Growth and development follows a definite pattern in one or the other dimension which is uniform and universal with respect to the individuals of a species.

5. The principle of proceeding from general to specific responses

Child's development general activity start first it is followed by specific activity.

6. Principle of interrelation

The growth and development in various dimensions like physical, mental, social, moral and emotional are interrelated and interdependent.

7. Development is predictable

With the help of the rate of growth and development of a child it is possible for us to predict the range within which his mature development is going.

8. Principle of heredity and environment

Heredity and environment are two important factors involved in the growth and development of the children. Heredity is referred as nature and environment is referred as nurture. For balanced growth and development there is balanced interaction between heredity and environment is essential.

Developmental tasks

R. H. Havighurst has defined a development task "A development task is a task which arises at or about a certain period in the life, of the individual successful achievement of which leads to his happiness and to success with later task, while failure leads to unhappiness and difficulty with later task". Developmental task are based on the aspiration and needs of the society.

Developmental task may be explained as

1. Every society and culture has certain norms.
2. Every society or culture expects it members to follow theses norms.
3. Theses norms are in terms of certain essential skills.
4. Mastery over these skills leads to happiness and failure leads to unhappiness.
5. Skills are related to age groups.

6. Norms vary somewhat from one socio-economic group to another. Example: birth to six years.
   a. Learning to walk.
   b. Learning to take solid food.
   c. Learning to talk.
   d. Learning to control the elimination of body waste.
   e. Learning sex differences

Infancy period

The first two or three years of life of the child is the period of infancy. The first two week is known as the period of neonate or the new born. The period from the third week to end of three years is known as babyhood. These three years of life of the individual is very important in the progress of the individual's later stage.

Physical development

Theses years are marked by rapid physical development. Milk teeth appears when the child reach one year. Boy's height increase about 25 cm during the first year and 12.5 cm during the second year. The nervous system develop at the faster rate. The size of the head begins to become lesser because body grows at the faster rate. Blood vessels, muscles, bones, digestive system, sense organs and other internal organs start to grow this period.

Intellectual development

There is a rapid improvement in the structure and function of the sensory organ. At the end of the infancy, the child is able to perform all sensory functions like seeing, hearing, tasting, smelling and feel when we touch. There is a gradual development in the coordination and control of body movements according to

the control of the brain. In these period, children are able to sensation, perception, attention, rote memory, formed simple concept.

Emotional development

Emotional development can be found in the child right from the birth. Child can cry as an expression of emotion, pleasure or pain. Later the negative emotion like anger, fear and positive emotions like affection, happiness developed in the child. Child depends upon his mother for all matters. He feels pleasure in the company of mother and distress in her separation.

Social development

Mother is the first and best friend. Child depend upon his parents for food, shelter and cloth. In this period, child wants to dominate his parents and elders. Child is quiet selfish. At the end of the period of infancy, child begins to establish contact with other infants.

Moral development

Child is selfish, he fails to differentiate good and bad, right and wrong.

Language development

Language development of the child begins from birth cry. In the beginning, child expresses himself through reflex sounds and feeble gestures. Next stage, child produces babbling sound. When the child reach 10 month it use one word and at the end of 2 years, the child is able to combine meaningful words to use. At the end of infancy, child start to ask questions.

Educational significance

1. Adequate freedom should be given to the child in all his movement.
2. The parents and teachers try to satisfy the needs of the child.

3. Infancy stage is plastic age, so teachers and parents should take care to the formation of good habits.
4. Play is nature of the child, so play material should be given to the child. This will make learning easier.
5. Child at the stage are interested in hearing stories. Through stories moral qualities of the child should be developed.

Childhood stage

From 3 years up to the onset of puberty period is known as childhood stage. Childhood stage is divided into two that is early childhood 3 to 6 and later childhood 6 to 12. Early childhood stage is referred as gang age. Childhood stage several functional changes takes place in the child.

Physical development

In this stage, growth of bones, muscles internal organs etc., takes place. The milk teeth is replaced by permanent teeth. Bones become harder. Height and Weight increase. All organs of the body grow steady. Due to the development of bones and muscles there are interested in motor activities like crawling, walking, running, jumping, climbing, kicking, catching throwing etc.,

Intellectual development

This is the age of intellectual development. The child develops power of observation, attention, reasoning and abstract thinking. The child's knowledge and information goes on increasing. He learns the three R's reading, writing and arithmetic. He is able to read books from which he gathers information and derives pleasure. During childhood stage the child's sensory equipment becomes well developed. His power of perception and memory becomes keen.

Emotional development

During this period child learns to control his emotions, fears disappeared. At this stage his emotions begin to be organized into sentiments. The emotional behavior of the child at this stage is further differentiated into shame, anxiety, hope, disappointment and affection for parents and other family members.

Social development

During this period child depends parents for food and shelter. They like to live independent with the gang. He is interested in games and group activities. He begins to acquire playmates, develop friendship with other children. He obtain social behaviour like co-operation, sympathy, social approval, teasing and quarrelling. During this period learn spiritual development. He wants to friendship with friends, classmates, elders and teachers and tries to develop his personality in various fields of life.

Moral development

He distinguishes between good and bad. He wants to avoid bad things. He is also interested to know the practice followed in different religions and customs.

Educational importance

1. Well organized physical activities should be given to the students for proper physical development.
2. Group activities should be given to the child for proper social development.
3. Teacher should not control emotions of the students. Emotions should be channelized in proper way.
4. Teacher should provide opportunities to create something new through exhibition, seminar and workshop.

Adolescence

Adolescence is a period from the onset of puberty to age of maturity. Stanley Hall rightly calls it's the period of stress and strain, storm and strike. It is a period of rapid physical and biological changes which may lead to confusions, tensions, feelings of insecurity and frustrations. Adolescence is known as the period of transition because during this period an individual is neither a child nor an adult. It is a very crucial period when the individual attains maturity, physically, intellectually, emotionally, sexually and socially.

Physical development

Adolescence physical development is very fast. In this period human body acquires its final shape. There is sudden shoot up in the height, weight and size. The size of the bone and muscles increase. All internal organs like respiratory circulatory, digestive and reproductive systems acquire their full development. Brain and nervous system attain full development during the period. Almost all glands become extremely active at this stage. The whole body of the adolescent acquires changes both boys and girls attain all the sex characteristics.

Intellectual development

Intellectual development reaches its climax. Intellectual powers like attention, sensation, perception, thinking, creativity, imagination, reasoning, concentration, concept formation and problem solving developed. The areas of interests widen.

Emotional development

Adolescence is a period of emotional instability. They are not consistent in their emotional expressions. This period is marked for heightening of emotions like anxiety, fear, love and anger. Their emotions fluctuate very frequently and quickly.

Social development

Adolescence behaviour is controlled by peer group which he wants to be accepted by the group which he is a member. The individual develops a strong sense of loyalty towards the group. They want to mould their behaviour according to the group. Adolescent spend less time with their family and may focus more on their peers. Young people also develop greater capacity to form strong relationship with adults outside of their family. Adolescent's interests, attitudes and values are influenced by peer group.

Moral development

Adolescent may think more about what is right and what is wrong, they also try to know about their role in the world. They are faith in god and are able to differentiate good and bad.

Importance of educational psychology to the teacher

Educational psychology very helpful in teaching learning process.

1. Catering to individual differences

No two persons are exactly alike. There is individual difference. People always differ in their level of intelligence, aptitudes, like and dislikes. They are gifted students, backward, retarded and handicapped children. The knowledge of educational psychology helps the teacher to cater two individual difference of children.

2. Understanding the learner

Educational psychology help to know acquisition of knowledge of the learner.

3. Understanding developmental characteristics

It helps to understand the stages of development of infancy, childhood and adolescence.

4. Understanding group dynamics

It helps the teacher to know group dynamics in classroom teaching learning as well as total school and social environment.

5. Understanding nature of classroom learning

It helps the teacher to adapt and adjust his or her teaching according to the level of the learner.

6. Understanding effective methods of teaching

It discovered new approaches, principles and techniques of teaching which are very helpful in teaching learning process.

7. Curriculum construction

Psychological principles are used in formulating curriculum for different stages.

8. Measurement of learning outcomes

It has produced many reliable test and instrument of mental measurement of students in the field of education.

9. Understanding the learning process

It discusses the nature of learning theories and types of learning for different age levels and situations.

10. Knowledge of mental health

It helps the teacher to know the various factors which are responsible for the mental ill health and maladjustment.

11. Developing scientific attitude

It is helpful in making the teacher more scientific in his or her educational practices.

12. Educational psychology and nervous system

Education depends on the function of brain and nervous system. So it becomes essential for the teacher to study the nervous system which control human behaviour.

13. Education and psychology and play

It helps the teacher to provide for a variety of activities for children.

14. Educational psychology and productive activities

It helps the teacher to know how various productive activities given to the student to fulfill the basic needs of the children.

15. Guidance for education of exceptional children

It helps the teacher for making specific provision and organization of educational Programmes for the exceptional children.

16. Character development

It helps the teacher to know the method he/she should adopt in inculcating character traits and moral principles among the children.

17. Timetable framing

It is helpful teacher to construct timetable.

18. Provision for co-curricular activity

It helps the teacher for giving different activities like debates, discussion, drama, social service activities, games and sports.

19. Production of suitable text books

It helps the teacher to give books according to the intellectual development of children, their needs and interest at different levels.

20. Democratic administration and management

It helps the teacher to practice democratic principle to manage all students belonging to different caste, religion and different economic condition.

UNIT II

ATTENTION, PERCEPTION AND MEMORY

Attention: Meaning, nature and determinants of attention – sensation and perception – Laws of perception – Errors in perception: Illusion and Hallucination – Memory: Meaning, types of memory and strategies for improving memory.

Attention

The process of concentrating the mind upon a particular activity within a view to achieving a specific object is called attention.

Meaning

It is the process of involving the act of listening and concentrating on a topic, object or event for the attainment of desired ends. Attention means an act of direction is one's thought towards a particular act or object. Attention is taken as a power or capacity of our mind to concentrate particular situation.

Definition

According to Ross "Attention is the process of getting an object of thought clearly before the mind".

Nature of Attention

1. Attention makes a very important contribution to the acquisition of fresh experiences.

2. Attention is selective.

3. It is a mental process.

4. Attention is constantly shifting.

5. Attention has narrow range/span.

Mental activity

The process of focusing attention on any object is performed by the mind. In the absence of clarity of mind, the mental processes do not become active.

Selectiveness of attention

Our attention does not focus upon a number of objects simultaneously, instead, at any one moment our attention focuses upon one specific object. For example in a class of 30 or 40 students, the teacher's attention often directs itself primarily towards the naughty or the extremely dull students.

Shifting nature

The nature of attention is unstable or shifting. The individual focuses his attention upon one particular object only with effort, and even then he manages

to keep it fixed upon that object for hardly three or four seconds. For example students preparing examination concentrate only for 3 or 4 hours.

Narrow span

The span of attention, at the moment of its initiation, is quite limited. As soon as the task is completed or when a particular series is completed, attention automatically changes to some other object.

Mobility

Attention is always in such a state that it does not remain fixed upon one object for any length of time. The turning of attention from one object or activity to another is called its mobility. For example when we become exhausted with studying text- books, we change over to novels or stories.

Activeness or alertness

Attention is made possible because of consciousness, and for this reason it is alert. The activities or goals on which we focus our attention have their existence in our consciousness.

Readiness

The preparatory set or readiness is the essential to response in attention. Our body prepares itself for a particular activity even before the process or activity is initiated.

Motor Adjustment

Whatever the object on which our attention is focused, our Sense organs and motor organs adapt themselves to take part in the activity required. As Soon as the Students seat themselves in the class, their ears, eyes, necks and their bodily positions adapt themselves with reference to the teacher.

Purposiveness

It is a universal truth that we focus our attention only upon those objects which satisfy our needs or serve our interests, and that, for the achievement of our goals, we become completely attentive. During examinations, students focus their entire attention on their Studies because their interest lies in passing the examination.

Attention: Types

Psychologists have classified attention in the following manner:

1. Voluntary attention:

This kind of attention operates or comes into existence when the individual consciously fixes all his energy upon a particular stimulus. For instance, the student concentrates his attention upon the questions likely to be asked in an examination because he wants to pass test. Voluntary attention may also be called active attention because, in this case, the attention is consciously or voluntarily activated, and focused by the individual. Voluntary attention develops gradually with age and maturity and it develops fully when the individual comes into contact with the environment.

2. Non-voluntary attention

The state in which our attention is drawn towards and focused upon a particular object without our desiring it is called non-Voluntary attention. While studying for an examination, the student's attention is consciously focused upon his books, but his attention will be drawn away if some neighbor plays his radio at full volume. In the same way, attractive and beautiful objects draw a person's attention without any desire on his part to observe them. Some psychologists have called this kind of attention Spontaneous Attention or Habitual Attention, because it is innate. It can also be considered passive or effortless attention.

3. Involuntary attention:

This kind of attention occurs when a person is forced to attend to something against his wishes. The individual is compelled to pay attention to some

stimulus although he wishes to avoid or ignore it. This kind of attention has no spontaneity in it, and consequently the individual has to make an effort to focus his attention. If during a teacher's lecture some loudspeaker stats blaring, the teacher as well as his students avoid to pay attention to its noise

4. Derived attention

A particular stimulus may be repulsive in itself, but it may be found attractive on account of another stimulus. In this case, the attention fixed upon the former Stimulus is called derived attention. A student having no interest in science studies it, nevertheless, with full attention because he wants to pass in the examination. In the case of derived attention, it is the derived interest which motivates the individual, not the primary interest.

5. Immediate attention

When attention becomes focused upon certain objects without any particular effort on the observer's part, it is called immediate attention. The root cause of this attention is interest, and our consciousness concentrates upon the object without any effort on our part.

6. Sensory or concrete attention

When the attention focuses upon a stimulus possessing a distinct and palpable form, it is called sensory or concrete attention. For instance, the attention which we fix upon a table, chair, book, tree or any other object.

7. Ideational of abstract attention.

The individual's consciousness focuses itself upon the main stimuli through contemplation or thinking. This kind of attention, called ideational attention, is characterized by thinking.

Factors of attention

The factors that facilitate attention may be classified into two main types. Those factors which reside in the object attended to, are called objective factors. As these factors operate on the individual from outside, they are also known as 'external' factors. The Psychology of advertising makes good use of these objective factors and the teacher also has to use them profitably in the classroom.

1. External factors or Objective factors
2. Internal factors or Subjective factors

Determinants of Attention	
Objective factors	Subjective factors

Size	Interest
Intensity	Need
Change	Mental set
Contrast	Mood
Novelty	Psychological condition
Movement	
Repetition	
Systematic form	

External Factors of Attention

Even if a person is not interested in any event or object, certain characteristics or the object or event may compel him to attend to it. Such object-related factors are external factors of attention: They are

i. **Size:** Objects of big size, arrest our attention immediately. Full page advertisements in newspapers capture our attention more easily than quarter page advertisements. For the same reason, people complete in putting up large cut outs of political leaders, advertisement hoarding etc. along the roadside.

ii. **Intensity:** As size is to figure, so is the intensity to the quality of the stimulus. Stimulus with high intensity like loud sound, deep striking colours, punchant smell

etc. are highly Successful in attracting our attention. While taking a class, if the teacher raises his tone he can overcome the disturbing noises coming from outside and retain the attention of his pupils on the ongoing lesson in the class.

iii. Change: Whenever there occurs sudden change in a stimulus, it immediately attracts our attention. For example when the fan suddenly stops, everyone in the class looks up and see the fan. Similarly a student sleeping in the class wakes up immediately when silence suddenly descends on the class. On entering into our house, we quickly notice the changed positions of tables and chairs in the hall. This implies that if a teacher talks with proper modulation in his voice, he can easily capture the attention of the students.

iv. Contrast: When a stimulus presents itself as a contrast in the midst of other stimuli, it turns out to be an attention winner e.g. a black dot in a white shirt looks predominant. The reason for drawing the median line on the tar road in yellow colour, men wearing a deep coloured trouser and light coloured shirt, writing on the blackboard with white chalk etc., is to capture our attention through the contrasting nature of the stimuli involved. To arrest the attention of students the class, the teacher should use contrasting activities like lecturing. Questioning, using charts and writing on the Blackboard while teaching.

v. Novelty: An unfamiliar object draws our attention more than a familiar one. When a stimulus is presented in a novel or unusual way, it attracts the attention of everyone. For example, we used to see usually the notice "No admission in

offices, but in an office when we see the same notice in a different manner like "Admission with permission only" it immediately strikes our attention and retained in memory for long.

vi. Movement: As compared to stationary objects, moving objects easily attracts our attention. For this reason only, the mother of a crying child, to divert its attention, points out to the child moving objects like a crow, car, aero plane and the like. Similarly to win the attention of the people, advertisers display hoardings with neon lights that alternately light up and put off so as to give the appearance of movement.

vii. Repetition: A stimulus, even of low intensity if appears repeatedly, it succeeds in winning our attention. The same business advertisement is repeated many times in mass media like T.V, Radio and newspapers only to attract the attention of consumers.

viii. Systematic Form: Objects with systematic form are easily attended to and retained long in our memory as compared to objects which are incomplete or irregular in form. (e.g. We listen to a faint tune even in noisy surroundings).

Internal Factors of Attention

The following are some of the important factors of attention which operate from within us.

1. Interest:

One's interest which composes one's dominant motivational system determines what one attends to. The attention of violinist walking along the bazaar is struck at the shop selling musical instruments, particularly violins. Every student during admission to college applies to courses of his interest. Students develop certain skills on the basis of their interest. Interested students keenly observe the lessons in the class. Teachers should always teach in such a way as to kindle the interest of the students.

2. Need or value:

Another important subjective factor determining attention is 'Need'. For example, the attention of a person waiting for bus of a particular route will always be restricted to buses of that route only. A hungry person easily spots the name board of a restaurant, though it is small in size, appear dull, but the name board of a nearby bookshop which is big in size may not catch his attention.

3. Mental Set:

One's mental set or disposition of readiness to react to a particular stimulus is another subjective factor of attention. For example the attention of a person who goes to railway station to receive his friend will always be on spotting the friend in the midst of others; he may not even hear if somebody nearby calls him. The reason for this is that his mind is set only to receive his friend.

4. Physiological condition:

The physiological condition of one's body also determines the level of attention. Students suffering from headache, stomach-ache, fever etc. will be unable to attend to the lesson taught in the class. It is always better to provide rest for those students who do not feel well, instead of compelling them to attend the class.

Ways and Means of Securing Better Attention in the Class

1. To secure attention of pupils, teacher has to first of all remove certain obstacles to attention. Poor physical conditions of pupil, fatigue, sensory defects, etc. interfere with attention Unhygienic seating, uncomfortable furniture, inadequate lighting, and etc. also hinder attention.

2. The teacher has to make good use of the objective factors of attention in his class. Loud voice, striking diagrams, clear blackboard work, use of coloured chalks, varied activities, novel illustrations, repetition of basic ideas, etc. are all of such nature.

3. At the elementary stage the teacher has to appeal to the involuntary attention by using concrete aids, direct experiences, play activities, appealing to the children's curiosity, etc. At the middle school level teachers can use Suitable techniques of motivation by stimulating acquired interest of pupils, their hobbies, etc. to evoke voluntary attention and foster sentiments of love for various school subjects and activities. At the

adolescent level, voluntary attention has to be evoked by appealing to the long-term interests of students and banking on their self-regard.

4. During classroom teaching, the teacher has to tell his pupils what to attend to, at the stage of introduction itself by providing the over-view of the lesson. While explaining a new concept, the teacher should relate it to the previous knowledge of the students and give examples which are familiar to them (preferably spotting them from the day to-day life situations).

5. The teacher should harness the natural interests of pupils to the class lesson and also create new interests of educational value. Children's interests vary with age: but generally all children are interested in creative, productive, free and life-like activities. So there is need for play way methods, projects, discovery approach to teaching, activity based Curriculum, etc.

Sensation

Sensation is the immediate result of a sense organ being acted upon by appropriate stimuli. They are the various qualities of experience that are derived from the stimulation of the sense organs or receptors. The stimuli are energy waves that produce an experience and these are transformed by the sense organs into pulses of energy in the nervous system.

Elements of Sensation

1. **Quality-** Each sensation has its own special quality, and there is no Similarity between one sensation and the other, the voices of two persons or the reflections of two colours are found to differ noticeably.

2. **Intensity -** Sensations differ in respect or their intensity. If two sounds are created at once, one will be intense than the other.

3. **Duration-**Every sensation lasts in the individual for a certain period of time, which depends upon the ability or capacity of the person

4. **Extensity-**This element is not found to exist in each and every sensation. Our eyes can see a distant object which is quite far away but a very loud sound can be heard from a distance also.

5. **Clarity-**Every sensation possesses the element of clarity, and experience indicates that a sensation remaining for a longer time possesses greater clarity; however, the attention of the individual also influences the clarity of a sensation.

6. **Localization-**Every sensation possess some permanent marks also, and it is for this reason that the location of a sensation can be determined.

Type of Sensation

Sensations are classified on the basis of the sense organs which they stimulate. For this reason, there are five kinds of sensations:

1. Visual sensation

2. Auditory sensation

3. Olfactory sensation

4. Taste sensation

5. Tactual sensation

All these five kinds of sensation possess varying degrees of quality, intensity, extensity, etc. In all of them these qualities are present as the main element.

1. Visual sensation -The visual sensation is received through the eyes, and hence every experience obtained through the eyes falls in this class. The rods and cones present in the structure of the eye generate awareness of the sensation of light or its absence, i.e., darkness. The ray of light falls on the eye and activates the optic nerve.

2. Auditory sensation- Auditory sensation are received by our ears which are peculiarly adapted for this purpose by virtue of the structure of the outer, middle and inner ears. Sound passes through the auditory channel and strikes the tympanum which generates vibrations in the bones connected to it. This vibration is then communicated to the brain in the form of an auditory message.

3. Olfactory sensation-The sensation of smell is received by the nose. Some of the main kinds of olfactory sensations are fragrance, spicy smell, resinous smell, burnt smell and putrid smell.

4. Gustatory sensation- The gustatory sensation or sensation of taste is felt by us through the medium of our tongue, which helps us to distinguish between sweet, sour, bitter, salty and other kinds of tastes.

5. Tactile sensation- The skin covering our body is also capable of experiencing various kinds of sensations. This awareness may be one of pain, coldness, heat, etc. When pressure is exerted on the skin, there is awareness or sensation of pressure. There are more pressure points in the tips of the fingers. Lips, hair, etc., and heat, cold wetness, etc., are felt by the skin on other parts of the body by sensation.

Perception

Perception is a psychological process in which the sensory inputs received from the sense organs are processed, organized and interpreted based on the past experiences of the organism so that the nature of the stimuli are meaningfully understood.

Perception is the process of transforming sensory inputs to which we attend, into organized impressions that we experience. Mental interpretation of sensation results in perception. So,

Perception = Sensation Meaningful Interpretation.

For example, the smell we experience due to the burning of an object is sensation and understanding that the burning object is rubber is perception. For this perception to occur, we should have already experienced the smell due to the burning of rubber and retain it in our memory.

Meaning of Perception

Perception originated from the Latin word 'perceptio', or 'percipio'. Basic meaning of perception is organization, identification, and interpretation of sensory information in order to represent and understand the environment. Perception is the psychological process responsible for our interpretation of the world.

Definition of Perception

Perception can be defined as our recognition and interpretation of sensory information. Perception also includes how we respond and interpret information.

Stages of Perception

Stage I: Selection

Our brain has limited capacity, thus, it cannot attend to all stimuli. We unconsciously / consciously select some stimuli and ignore others.

Stage II: Organization

Here, stimuli are arranged mentally in a meaningful pattern. It is unconscious process depends upon human brain naturally organise stimuli to make a meaningful pattern and thus interpretation.

Stage III: Interpretation

Here, we assign meaning to the organized stimuli. Interpretation of the stimuli is based on one's experience, needs, beliefs and expectations. Thus, this stage is subjective in nature and the same stimuli can be interpreted differently by different individuals.

Importance of perception

1. Perception is the first channel of child's learning. Without perception, the child cannot imitate others by observing them. Observation is motivated perception, which forms the basis of all inquiry.

2. Precepts form the first step in our emotional activities as purposeful tasks.

3. Without perception, imagery and imagination are not possible.

4. Perception is reciprocally related to self-concept. Self-concept develops only through perception.

5. Perception is related to attending and observing. We perceive only those stimuli that we attend to.

6. Perception helps us to understand the different objects and events in our environment and learn to adapt our reactions, towards them.

Laws of Perceptual Organisation

Following are the important laws governing perceptual organization.

1. Law of Pragnanz

2. Law of Proximity

3. Law of Similarity

4. Law of Closure

5. Law of continuity

Law of pragnanz

We always perceive anything as a whole configuration or pattern so that it is simple, meaningful and stable. For example, on seeing a man riding a cycle, we do not perceive the cycle and the rider separately; it appears as a whole unit to us.

Law of Proximity

According to this law, perceptual groups are favoured according to the nearness of the parts. This means that we perceive all closely situated or located things as a group. Similarly the 12 parallel lines drawn below are perceived by us as four groups of 3 lines each.

Law of Similarity

Wertheimer stated this law as "other things being equal, the stimuli that are similar, will have greater tendency to be grouped as a single unit". For example,

in figure (A), we perceive the objects in three horizontal groups (triangles, circles and squares) whereas in figure (B) using the same law of similarity, we perceive the objects in three vertical groups.

Law of Closure

This law indicates that closed or completed figures are more stable than incomplete or unclosed figures and hence our mind fills up the gaps any and perceive the object as whole and complete. For example, we perceive the figure given here as a triangle, though there gaps between the lines. For this reason only, while proof reading, missing letters escape our attention as our mind nulls up the gaps and reads it correctly.

Law of Continuation

It indicates that organization in perception appears to be going infinitely in the same direction. So, there is a tendency for factors to give direction, movement and continuation. That is why the following series of dots... appear to be a straight line. For this reason only, cinema scenes though shot individually, when they are run in a sequence at the rate of 15 frames per second, they appear to be one and continuous.

Errors in Perception

Illusion

Wrong perception is referred as illusion.

Causes of Illusion-

Illusions nay be the result of numerous factors, Such as:

1. Irregularity in external circumstances.

2. Defect in the sensation.

3. Absence of pre-determined habits

4. Previous experience, present interest or perfectness.

5. Suggestion of instruction.

An amusing example of illusion can be seen in the fact that when one is sitting in stationary train, one gets the impression that it has begun to move when, In fact, it is the train on the adjacent track which is in motion.

Illusions are different types:

1. Illusion of movements (e.g. a spot of light in dark appears to be moving around).

2. Illusion of perspectives (e.g. two parallel lines appear to meet at a long distance).

3. Reversible perspective figures.

4. Muller – Lyer illusion and vertical – horizontal illusion.

Hallucination:

A hallucination is a mental state in which a person begins false perception of something.

There are two kinds of hallucinations:

1. Visual hallucination - A hallucination which occurs in the sphere of vision is called a visual hallucination, and it means seeing an object which is not in front of eyes at all.

2. Auditory hallucination- The hallucination which occurs in the sphere of hearing is called an auditory hallucination.

Causes of hallucination

Hallucination are caused by the following factors:

1. Continuous reflection - Individuals who keep on thinking of only one thing constantly tend to suffer from hallucinations.

2. Imagination and daydreaming-People with very sensitive imaginations and an inclination to daydreaming are more susceptible to hallucinations than other persons.

3. Mental disease- Hallucination are found to occur in patients suffering from hysteria, Schizophrenia and other mental disorders.

4. Unconscious mind- The desires concealed in the unconscious mind are also responsible for hallucinations.

5. State of drunkenness- Individuals habituated to intoxicating substances also suffer from hallucinations.

Memory

Introduction

Living organisms have the unique capacity of conserving past experiences and using them in some way or other in their future courses of action. They have the capacity of remembering, that is the capacity of 'storing' and 'retrieving'. All learning implies remembering or what used to be called memory. One who has good memory is able to learn efficiently and quickly: good learning is the basis for good memory and good memory indicates that efficient learning and assimilation have taken place.

Meaning of Memory

A layman may define memory simply as the capacity to reproduce what is learnt. Psychologically it is much more complex. Psychologists prefer the word 'remembering' to 'memory'. Remembering is an active process of mental search.. Remembering refers to retention' of what is learnt' and 'retrieving' it when it is required for subsequent use.

Remembering consists of three stages:

1. Learning or memorizing

2. Retention or storing

3. Retrieving or gaining access to it.

Definitions of memory

Memory is the process of taking in information from the world around us, processing it, storing it and later recalling that information.

Memory: classification

Individual has a different capacity for memorizing a particular fact, Some People never forget a fact after encountering it once whereas others forget it despite coming across it repeatedly. It is on the basis of these varying capacities that memory is classified as follows-

1. Immediate memory – it is the routine ability to hold on going experiences in mind for a few seconds (short term memory).

2. Permanent memory – this form of memory which is used to hold an unlimited amount of information for an indefinite period of time.

3. Mechanical memory – mechanical memories are products of conditioned habituation of behaviour, mostly done unthinking.

4. Rote memory – is a memory for material without much reference to the meaning, emotions or to the context to which it is associated. The major practice in rote memory is learning by repetition.

5. Logical memory – logical memory depends upon intelligent, understanding or assimilation.

6. Passive memory – this kind of memory consists in the remembering of a past experience without any effort or requirement.

Memory can also be classified in terms of duration of the retention period as short term memory (STM) or Long term memory (LTM).

Short and Long Term Memories

Short term memory, also called primary or working memory, lasts for 15 to 30 seconds. We remember a telephone number till we get the connection to that number. We have to look at the telephone directory, if we are to phone after a few hours. Experimental evidences show that only $7 + 2$ separate items can be held in short term memory at one time (referred to as Memory span). Primary memory is not the terminal point. Information is being transformed to long term memory for more permanent storage. The multiplication tables we have learnt, the poem we have memorized, our date of birth, wedding day, our telephone Number, residential address etc. are permanently remembered

Because of our long term memory.

More time and effort are essential for moving information into long term storage. While the capacity for STM is limited, the capacity for LTM is unlimited. The information passed on to LTM is placed into organised categories, where it resides, almost permanently. There appear to be different brain processes for STM and LTM. The transfer from STM to LTM takes place not only because of rehearsal and repetition but because of coding which is the process of analyzing information and compressing it into abbreviated form.

Characteristics of Good Memory

On the basis of the results obtained from the foregoing methods of memory testing, the following characteristics for getting a good memory have been established:

1. Rapid learning

The quicker an object is observed, the quicker is its memorisation. Rapidity in learning is influenced by the methods of learning, environment and ability.

2. Good retention

A person's memory is considered good if he has good power of retention a of time is said to possess a good memory, Students possessing little or limited powers of retention face difficulties in passing their examinations of time is said to possess a good memory, Students possessing little or limited powers of retention face difficulties in passing their examinations.

3. Rapid recall

It is a characteristic of memory that whatever is learned or experienced should be recalled quickly. There are people who are often found saying that something is on the tip of their tongues but they cannot recall it.

4. Rapid recognition

A person possessing a good memory immediately recognizes related experiences and patterns.

Memory: Influencing factors

1. Mental set

An experience cannot be memorized till students are brought in to a mental condition favoring the retention of that experience. When students become mentally prepared to learn a specific fact, they succeed in memorizing it.

2. Motivation

For any piece of knowledge or experience to be retained for a long time, it is essential that the student be motivated towards acquiring it, because, in the absence of motivation, they will lack interest in it and hence they will be unable to memorize it.

3. Meaningful content

If the content or subject matter to be learnt is meaningful, students will be able to memorize it. But if this content is meaningless, students will forget it even after making considerable efforts to memorize it.

4. Repetition

Students should be made to repeat and revise the subject matter given to them for memorizing. If this process of repetition or revision fails at any point, the student's retention will be weakened proportionately.

5. Physical and mental health- Children lacking in mental and physical health face considerable difficulty in memorizing any fact. In contrast, a child who is mentally and physically healthy is able to memorize almost any fact with great ease.

6. Method of learning-

Memorization is also affected by the method employed in teaching a particular fact or subject, since memorization is influenced, to some extent, by the method of learning employed. If the correct or most suitable method is used in teaching children of a particular age, their memorization of the subject matter will undoubtedly be good.

7. Testing

The memory of students can be improved by conducting tests at regular intervals, because tests inculcate in students the habit of memorizing and recall.

8. The desire to memorize

If a child does not wish to remember some specific facts, it is not possible to compel him to do so. For this reason, it is necessary to stimulate the child's desire and interest in the content to be taught.

Methods for Improving Your Memory

A memory strategy is a technique that you can use in order to help improve remembering information that you have learned. There are many techniques out there that you can learn, both internal and external.

Focus Your Attention

Attention is one of the major components of memory. In order for information to move from your short term memory into your long-term memory, you need to actively attend to this information. Try to study in a place free of distractions such as television, music, and other diversions. Getting rid of distractions might be a challenge, especially if you are surrounded by noisy children.

Structure and Organize

Researchers have found that information is organized in memory in related clusters. You can take advantage of this by structuring and organizing the study materials. Try grouping similar concepts and terms together, or make an outline of your notes and textbook readings to help group related concepts

Utilize Mnemonic Devices

Mnemonic devices are a technique often used by students to aid in recall. A mnemonic is simply a way to remember information. For example, you might associate a term you need to remember with a common item that you are very

familiar with. The best mnemonics are those that utilize positive imagery, humour, or novelty.

Visualize Concepts

Many people benefit greatly from visualizing the information they study. Pay attention to the photographs, charts, and other graphics in your textbooks. Draw charts or figures in the margins of your notes or use highlighters or pens in different colors to group related ideas in your written study materials.

Relate New Information to Things You Already Know

When you're studying unfamiliar material, take the time to think about how this information relates to what you already know. By establishing relationships between new ideas and previously existing memories, you can dramatically increase the likelihood of recalling the recently learned information.

Read Out Loud

Research suggests that reading materials out loud significantly improves your memory of the material. Educators and psychologists have also discovered that having students actually teach new concepts to others enhances understanding and recall.

Pay Extra Attention to Difficult Information

Researchers have found that the order of information can play a role in recall, which is known as the serial position effect. While recalling middle

information can be difficult, you can overcome this problem by spending extra time rehearsing this information. Another strategy is to try restructuring what you have learned so it will be easier to remember. When you come across an especially difficult concept, devote some extra time to memorizing the information.

Vary Your Study Routine

Another great way to increase your recall is to occasionally change your study routine. If you're accustomed to studying in one specific location, try moving to a different spot during your next study session. If you study in the evening, try spending a few minutes each morning reviewing the information you studied the previous night.

Get Some Sleep

Researchers have long known that sleep is important for memory and learning. Research has shown that taking a nap after you learn something new can actually help you learn faster and remember better.

In fact, one study published in 2014 found that sleeping after learning something new actually leads to physical changes in the brain. Sleep-deprived mice experienced less dendritic growth following a learning task than well- rested mice.

Understand the Material

Before you even start memorizing your study material, you need to understand it. Do this by finding a connection between your study materials and something you have already experienced. The more you can relate the material to what you already know, the easier it is to learn and remember.

Space Out Your Work

Make sure that you do not cram too much work into one study session. When scheduling your study slots, stretch out your work over numerous days. Be sure to only focus on small quantities of material at a time. The fewer new concepts you need to learn in each study session, the easier it is to remember the information.

Repetition

As the saying goes, practice makes perfect!

In order to truly master a new concept or skill, you need to practice it over and over again. Doing so will help you store this material in your long-term memory. You can practice this material in a number of ways, including writing, saying, or drawing the information.

Association

If the material is unfamiliar, think about how it relates to things that you already know. Try to establish a connection between the study material and people, places, situations, or feelings that you are already familiar with.

Storytelling

Write a story focusing on the key points of what you're learning. As you write the story, arrange what you've learned in a logical sequence so that you do not miss anything out. When you retell the story, each part of it will trigger your memory and remind you of what comes next.

Play Games

Playing games makes learning fun. You can use games to help you memorize facts, formulas, or even events. As you play the game, you will continue to revise the material again and again. You will also have fun socializing with friends while doing so!

Rote Rehearsal

This strategy involves repeating information in your head over and over again as you learn it. Often, this is done to remember obscure details such as phone numbers. This technique is typically used to store details in your short-term memory only.

UNIT 3

MOTIVATION AND LEARNING

Motivation

Motivation is an internal process. It is defined as a drive or a need, motivation is a condition inside a person the desires are change, either in the self or the environment. Motivation is influenced by the satisfaction of needs that are either necessary for sustaining life or essential for well-being and growth. Physiological needs for food, water, and sex serve the organism to maintain life and also provide satisfaction from doing so. Psychological needs for autonomy, mastery, and belonging direct our behaviour in much the same way. As do the needs for achievement, power, closure, meaning, and self- esteem. Some of these needs will become motives as will all the intrinsic activities we engage in.

Definition of motivation

Motivation is the process of arousing, maintaining and controlling interest in a goal directed pattern of behaviour.

Characteristics of Motives

1. Motivation is a psychological process (internal)

2. This internal process is initiated by some need or want

3. It directs our efforts towards the goal that satisfies the need; i.e. it helps us to select the appropriate behaviour so as to reach the goal.

4. It brings energy mobilization in us

5. It helps to sustain the attention in one's efforts or task

6. Restless to achieve the goal, stops after the goal is reached.

Meaning of Motivation

Motivation refers to a process of inducing and stimulating an individual to act in certain manner. It refers to the initiation direction, intensity and persistence of behaviour.

Types of Motivation

Motivations are primarily separated into two categories: extrinsic and intrinsic.

Extrinsic motivation

Extrinsic motivations are those that arise from outside of the individual and often involve rewards such as trophies, money, social recognition, or praise. Extrinsically- motivated behaviors are performed in order to receive something from others. They do not come from within the individual, but from society other people.

Intrinsic motivation

Intrinsic motivation means that our motivation to accomplish our goal comes from within us. It is determined by our own values and goals. The three types of internal motivation are sense of purpose, autonomy and mastery.
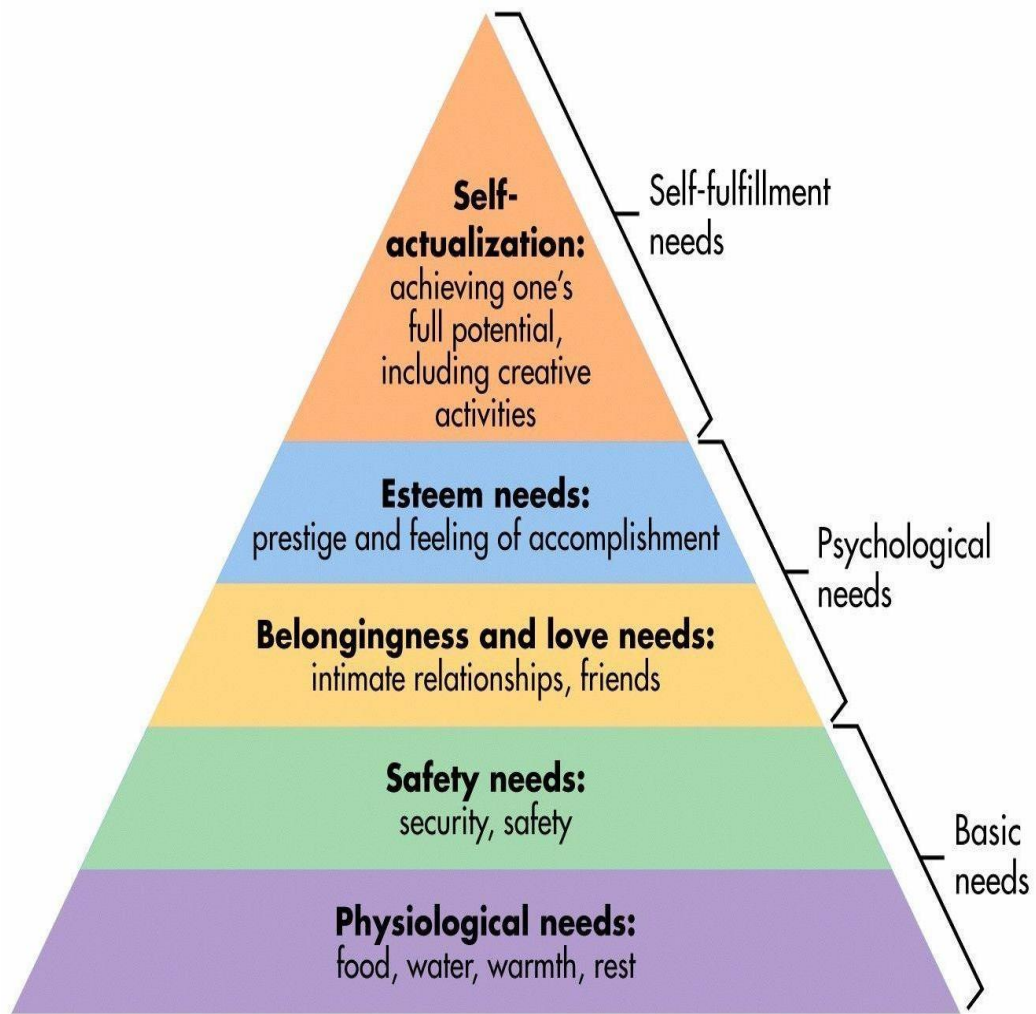
Maslow's Theory of Hierarchical Needs

Abraham Maslow proposed a comprehensive theory of need gratification and growth motivation, including fundamental physiological needs, intermediate needs and what are called Meta needs which a person is able to attend to only when his lower order needs are satisfied. Such meta needs are of creativity and self-actualization.

According to Maslow:

1. Human needs are many and multiple; all are not of equal importance, i.e. needs can be arranged hierarchically.

2. The organism will aspire for a higher order needs only when the lower order needs get fulfilled.

Thus his hierarchy of human needs can be represented pyramidically as follows

Self-actualization: achieving one's full potential, including creative activities

Self-fulfillment needs

Esteem needs: prestige and feeling of accomplishment

Belongingness and love needs: intimate relationships, friends

Psychological needs

Safety needs: security, safety

Physiological needs: food, water, warmth, rest

Basic needs

1. Physiological needs:

These are the lower in the motivational hierarchy, which include need for food, water, oxygen, sleep, sex, sensory satisfaction and the like. These are vital for survival and hence should be fulfilled before the next higher order motives become prominent. Perhaps the main reason why disadvantaged and poor children refuse to be motivated in the classroom to learn is that their basic bodily needs remain unsatisfied.

2. Safety and Security needs:

They include shelter, clothing and personal safety, security of the future, routine, regularity etc. Children do need discipline within their levels of understanding in order to perceive an orderly and organized world.

3. Affiliational needs

It refers to the individual's hunger for affection. "A pupil who is not loveable because of his behaviour, needs to be loved most". Identity implies belongingness and often underachievement of certain pupil's results from lack of love and belonging.

4. Esteem needs:

In all of us there is a desire for strength, mastery, competency etc. leading to a feeling of independence and freedom. We want to be high in the eyes of others. According to Maslow, satisfaction of this self-esteem need generates

feeling of worth, confidence and adequacy. Lack of satisfaction of this need results in discouragement, feelings of inferiority and inadequacy.

5. Achievement needs:

They may be classified as need for knowledge and the need for understanding. Need for knowledge is satisfied when there is access to information, knowing how to do things, meaning of things, events, symbols etc. Needs for understanding implies knowledge of relationships, process, the integration of knowledge into broad structure etc. Thus achievement needs are related to intellectual domination and cognitive competencies.

6. Aesthetic needs:

This is concerned with appreciation of order and beauty. One whose lower order needs are fully satisfied or knows that he need not bother about them, derives pleasure in beauty, nature etc. Tagore, Wordsworth etc. are the best examples for this.

7. Self-Actualization needs

Self-actualization means to fulfill one's individual nature in all its aspects. One who is talented in one specific area feels uneasy, if that talent is not nurtured and utilized. He wants to attain perfection in that area. The highest level of functioning occurs when a person is self-actualized. People can be motivated towards self-actualization only when the lower order needs are satisfied.

Educational Implications of Maslow's Theory

1. The idea that the deficiency needs of pupils are to be satisfied to enable them to function at a higher level of motivation has to be borne in mind when dealing with economically and culturally disadvantaged children.

2. Looking after ventilation, lighting, furniture, blackboard, provision of mid = day meals for the needy, classroom arrangement for physical and psychological safety and showing interest in every pupil so that he feels that he belongs to the class are vital.

3. An individual tends to raise his goals after success and lower them after failure; so teachers should maintain realistic level of aspiration by providing graded assignments ensuring to include certain amount of success for every pupil.

4. The teacher should enhance the attraction and minimize the dangers of growth needs.

5. The curriculum should be drastically changed and periodically revised so that it serves the vocational needs of pupils.

Level of Aspiration

Level of Aspiration defines as "the level of future performance in a familiar task which an individual, knowing his level of past performance in the task, explicitly undertakes to reach". F. Hoppe defines it as "the degree of accomplishment consciously striven after by an individual". Generally normal people set their level of aspiration little above their present level of performance, raise it after success and lower a little after experiencing failure. Abnormal people and people dominated with excessive fear of failure set their future goals either unrealistically too high or low.

Uses of Level of Aspiration

1. Raising of one's level of aspiration increases his self- confidence.

2. Helps in setting one's goal realistically, according to one's level of abilities and skills.

3. Success stimulates one to strive for further success.

4. Avoids failures.

5. Helps to know how much one has to try and work hard to reach his goal.

Jean Piaget's Theory of Cognitive Development

Cognitive Ability

According to Piaget's theory information received through sense organs while interacting with one's environment, are processed by various mental abilities like perceiving, storing, classifying, compiling. Expanding, recalling etc. As a result of this mental processing, the individual understands persons, objects, events etc. in his environments and also the relationship existing among them. This cognitive ability to process information forms the basis for many of our mental activities like attention, perception, remembering, recalling, thinking, reasoning, problem-solving etc.

Cognitive structures called 'Schemata' for processing information and these structures undergo significant transformations during development, thus becoming qualitatively different at different stages. These are sequential, invariant and universal.

Intelligence, according to Piaget, is a tool by which the individual organizes his experiences and adapts to the world. Though these two basic functions viz. 'Organisation' and 'adaptation' representing our way of 'dealing with the

environment' are inborn and remains the same throughout our life (i.e. the level of intelligence remains constant in any individual); the intellectual structure (called cognitive structure or schema) alone changes qualitatively in each of the four stages as Piaget has mentioned. As a result, the behavioural patterns of children in these four stages appear to be distinctly different

Process of Cognitive Development

Piaget considers that the process of cognitive development consists of 4 components Viz. (i) assimilation (ii) accommodation (iii) adaptation and (iv) Organisation

Components of Cognitive Process

According to Piaget to "Know an object one must act upon it either physically or mentally" and these activities that people perform on objects are sequentially organized and represented in the mind. This mental representation is called by Piaget as 'Schema. In the process of developing schemas and subsequently modifying them, four components are involved. They are: (i) Assimilation (ii) Accommodation (iii) Adaption and (iv) Organisation.

Assimilation

'Assimilation' means taking in or absorbing experience information from the environment and fitting them into the existing schema in the individual) As

soon as the schema is developed, the child tries to apply it to every new object and in every new situation he faces or the incoming information he receives.

Accommodation

Following 'assimilation', accommodation takes place. Accommodation means making room for, or adjusting to incoming information by modifying the existing schema in the individual.

Adaptation

Assimilation helps in getting, experiences in the existing schema, while accommodation helps in combining / expanding/ modifying the schema based on his new experiences. Thus the individual is helped in adjusting to his new environment. This adjustment to new environment is known as adaptation.

Organisation

Organisation is the tendency to systemise and unify experience into a coherent system.

Stages of Cognitive Development

According to Piaget to "know an object one must act upon it either physically or mentally" and these activities that people perform on objects are represented in the mind as 'Schemas'. In the early developmental stages, the schemas are mostly physical actions on the objects of the immediate environment; but as the child grows into adolescence, these physical actions, become mental operations. Each

developmental stage has its particular schemas of organizing and adapting to the environment) from sensory motor actions to concrete and later formal operations. On the basis of the schemas constituting cognitive structure, Piaget speaks of 4 important stages of cognitive development:

1) Sensory-Motor Stage (0 to 2 years)

2) Pre-operational Stage (2 to 7 years)

3) Concrete Operational Stage (7 to 11 years)

4) Formal Operational Stage (11 years and above)

Sensory Motor Stage 0-2 years

This stage is mainly based on immediate experience through the 'senses' and the major intellectual activity is the sensory interaction of the environment. The child's activities are physical and without language to label experiences. This stage is characterized by:

i) Development of sensory, motor and perceptual skills.

ii) Coordination of motor activities. development of rudimentary memory;

iii) Gradual progression from reflex behaviour to intentional behaviour,

iv) Development of curiosity, and trial and error exploration of immediate surroundings;

v) Child is able to differentiate itself from the object.

vi) Practical intelligence like seeing grasping, sucking etc. to deal with environment.

Pre-operational stage 2-7 years

In this stage the child develop characters like ego-centrism, animism, realism, centering etc should be developed.

1. **Ego centrism -** They are not have the ability to understand others word but they use unique word (child know the meaning of that word).

2. **Animism -** Treating inanimate objects as living ones e.g. children bathing, dressing and feeding their dolls as if they are alive.

3. **Realism -** Dreams are considered real e.g. children at this stage pretend stuffed toys are real, have imaginary friends etc.

4. **Centering -** The child can concentrate on only one aspect of a thing at a time.

5. Child consider their parents as omnipresent and omnipotent

6. They have no ability to play game according to the rules.

Concrete Operational stage – 7-11 years

During this stage child masters several concept like classification, distinguish colour, shapes etc.

1. In this stage they play game according to the rules and regulation

2. They have ability to concentrate more than one concept at the time.

3. In this stage they are able to understand reverse.

4. They distinguish good and bad, right and wrong.

5. They start to think.

Formal Operational Stage – 11 and above

1. In this stage they bare abstract and flexible in knowing the object in the environment.

2. They are able to evaluate ideas, theories, principles and law.

3. They understand rules and regulations of the society.

4. Reasoning ability and problem solving ability is well increased.

Educational Implications of Piaget Theory

1. True learning' as discriminated from 'verbal learning 'involves the acquisition of new structures of mental operations that permit-the child to assimilate new experiences. Hence experiential curriculum is advocated.

2. Emphasis on discovery approach in learning

3. Candidate should provide specific educational experience based on

children's developmental level.

4. Arrange classroom activities so that they assist and encourage self-learning.

5. Do not treat children as miniature adults; they think and learn differently from adults.

6. Co-curricular activities have equal importance as that of curricular experiences in the cognitive development of children.

7. Sufficient time should be provided to the child to internalize the experiences.

8. Moral and intellectual growth go together and only after the age of 11, can the child evaluate actions in the light of motives.

9. Activity approach at the primary classes and concrete methods of illustration (like use of aids, demonstrations, etc.) at the middle school level are advocated. Verbal method of teaching should be practiced only from high school classes.

Pavlov's classical conditioning theory

Conditioning

Conditioning in psychology, a behavioural process whereby a response becomes more frequent or more predictable in a given environment as a result of reinforcement (stimulus, reward or desired response). They are two types of conditioning

1. Classical conditioning

2. Operant conditioning

Classical conditioning

Classical conditioning was propounded by Russian Psychologist Ian Pavlov classical conditioning is a learning procedure in natural stimulus (biological stimulus) is combine with Artificial stimulus to produce natural response.

Principles of classical conditioning

- Acquisition

- Extinction

- Spontaneous recovery
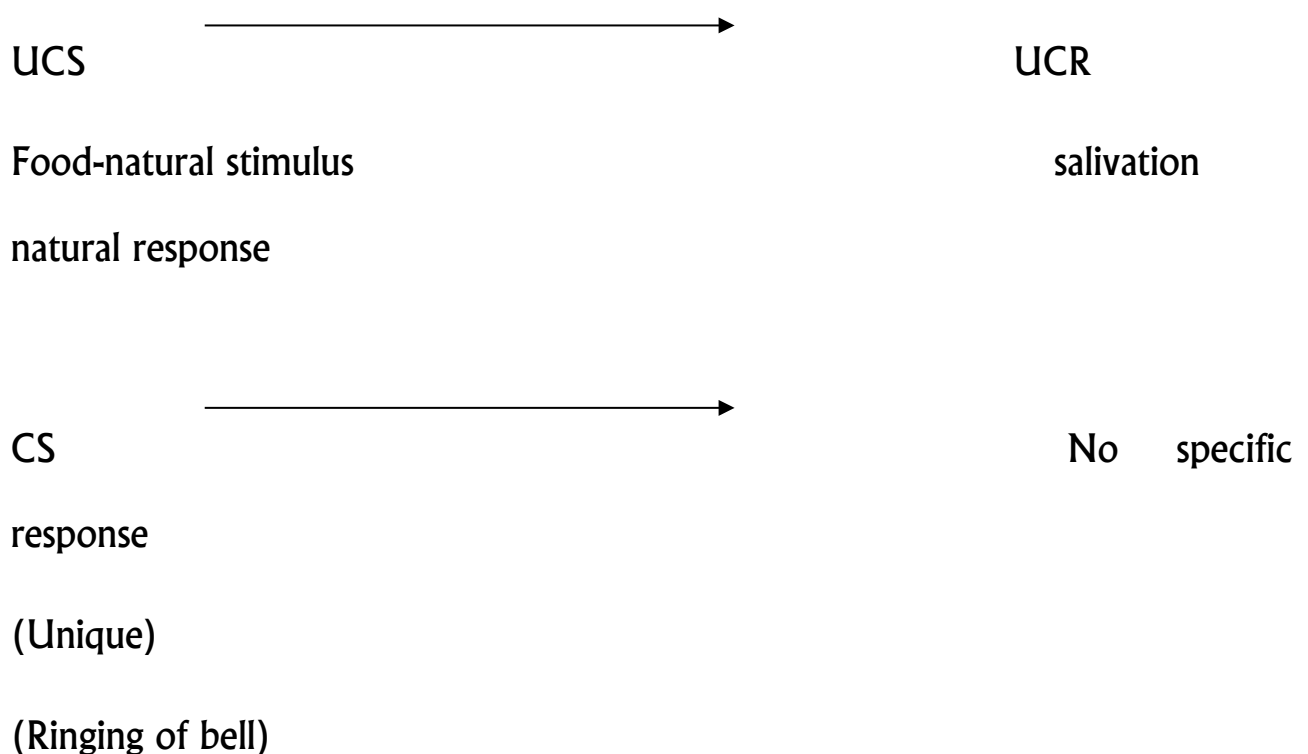
- Stimulus generalization

- Stimulus discrimination

Pavlov's experiment

Pavlov conducted his experiment in the hungry dog. During his experiment he presented food (UCS) (natural stimulus), a few seconds after ringing a bell (CS) (Artificial stimulus). At first the dog did not exhibit any specific response on hearing the ringing bell. Sometimes it may turn round towards the direction of sound raise its ears, or barking but not salivate. But when it started taking food
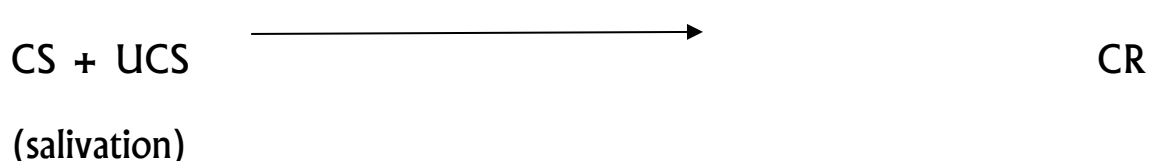
it salivated. That shows bell is the neutral or artificial stimulus. So it was not respond.

Next second stage bell sound (neutral or artificial stimulus) and food (natural stimulus) are combined and it was continuously given to the dog for 15 days. Now the dog start salivated even on hearing the bell. Now the dog is conditioned and it show specific response if it hear the bell sound. This phenomenon of neutral or artificial stimulus to elicit specific response by continuously combining with a natural stimulus is known as conditioning.

Stage I Before conditioning

UCS $\longrightarrow$ UCR

Food-natural stimulus   salivation

natural response

CS $\longrightarrow$ No specific

response

(Unique)

(Ringing of bell)

Stage II Process of conditioning

CS + UCS $\longrightarrow$ CR

(salivation)
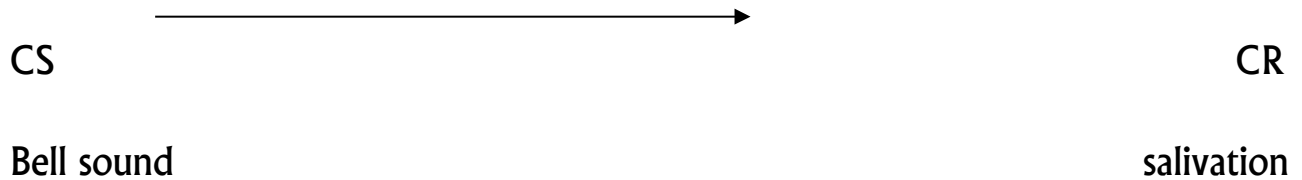
Bell + Food

(Neutral stimulus or artificial stimulus) + (natural stimulus)

Stage III After conditioning

$\longrightarrow$

CS   CR

Bell sound   salivation

Acquisition

It is the first stage of learning when a response is established. It means when the stimulus comes to evoke the conditioned response.

Extinction

CS neutral stimulus is not followed by UCS food or natural stimulus, for few days. Dog stop to salivate for bell sound (neutral stimulus). This process is known as extinction.

Spontaneous recovery

It refers to the reemergence of previously extinguished conditioned response after delay.

Stimulus generalization

Stimulus generalization is the tendency for the conditioned stimulus to evoke similar response has been conditioned. Example Ivan Pavlov conditioned dog to salivate using the sound of bell and food.

Stimulus discrimination

It involves ability to distinguish between one stimulus from the stimulus.

Educational implications of Pavlov classical conditioning theory:

1. Learning process reading, writing, spelling and habit are learned through conditioning.

2. Develop favourable attitudes of the children towards learning, teachers, subjects and the school.

3. Elimination of bad habits of children through deconditioning.

4. Classical conditioning is used in language learning by associating words with pictures or meanings.

SKINNER'S OPERANT CONDITIONING

Operant conditioning is a method of learning that occurs through rewards and punishments of behaviour. Through operant conditioning, an individual makes an association between a particular behaviour for a stimulus.

B. F. Skinner was one of the American Psychologists, he developed the theory of operant conditioning. The idea behind that theory is by giving reinforcement the particular response will occur again for particular stimulus.

The reinforcement may be

1. Positive reinforcement

2. Negative reinforcement

3. Punishment

4. Extinction

Skinners was call further of operant conditioning

Skinners Experiment

Skinners box is a cage in which a while hungry rat were electricity recorded. Inside the box one lever system if the rat touch the lever it got food pellets. The rat on moving here and their accidently it touch the lever it get food .Here the food is the reinforcement to the rat , it learn to touch the lever .The action of pressing the lever is an operant response/ behavior .

II Experiment

He conduct another experiment in pigeon, the pigeon moves about the cage it was trained to peck the disk. Every time when it pecked food was got. The food reinforced the behavior of pecking the disk was called an operant conditioning.

Importance of Operant Conditioning in Learning

1. Skinners theory play an important role in helping psychologist to understand how behavior is learned.

2. It explains how reinforcement can be used so effectively in learning.

3. In classroom it is used to know the difference between positive reinforcement and negative reinforcement.

4. Positive reinforcement is used in the classroom to increase desired behavior of the student.

5. Operant conditioning is used in animals for training to give particular behavior

Skinners Contribution to Education

1. Programmed learning

2. Teaching Machine

3. Computer assisted instruction are used for individualized instruction.

Thorndike's Trial and Error Learning Theory

Introduction

Trial and error learning was propounded by American Psychologist E .L. Throndike. According to him learning takes place by trial and error .In learning the learner select a correct response out of a large number of possible once and connects it with the appropriate stimulus or (It is characterized by repeated, varied attempts which are continued until success).

In trial and error is a problem solving method in which multiple attempts are need to reach a solution. It is a basic method of learning that at essentially all organism use to learn new behaviour.

Thorndike's Experiment

He placed a hungry cat in the puzzle box. A piece of fish was kept outside the box. The box could be opened by correctly manipulating a latch. On seeing the fish, the cat became restless and made frantic (hurried) efforts such as biting, clawing and dashing the wall. Accidently it touches the latch and the door opened and the cat ate the fish. This experiment was repeated several times. First few trails incorrect responses was made by the cat then slowly the time taken to open the door was less. After many trails the cat eliminated the wasteful movement and knows how to open the latch. This experiment shows that learning is simply selecting and connecting the correct response. So the bond is established between stimulus and correct response.

Throndike's law of learning

1. Law of Readiness

If one has to learn an action or activity he should be mentally and physically fit (reads) for the action. Teacher should see the child is ready or motivated physically and mentally before he begins to teach.

2. Law of Exercise or law of use and disuse

Law of use

If any action is repeated by an organism in certain condition learning occurs (bond between stimulus and response strengthened)

Law of Disuse

If the action is not repeated by an organism there will be no learning (its lose the strength or bond between stimulus and response).

3. Law of effect

The bond between stimulus and a response leads to happiness it will strengthen the bond and if the result is not happy (contrary) the bond will be weakened. A child is happy if she or he get correct answer in might's he will be unhappy to get wrong answer.

Educational Implications

1. Bad habits of the student should be eliminated by disuse law and good habit or stamped in by law of use.

2. Law of exercise- more exercise should be given to the student for learning.

3. Rewards, encouragement, precise and motivation should be given in the class to promote learning.

4. School activities should arrange in such a way that all learners may have some degree of success and confidence in their work.

5. Mathematical problem is done through trial and error method.

CONSTRUCTIVIST THEORY:

John Dewey

Constructivism is 'an approach to learning that holds that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner'

PRINCIPLES OF CONSTRUCTIVISM

1. Knowledge is constructed, rather than innate, or passively absorbed

Constructivism's is a central idea that human learning is constructed, that learners build new knowledge upon the foundation of previous learning.

This prior knowledge influences what new or modified knowledge an individual will construct from new learning experiences

2. Learning is an active process

The second notion is that learning is an active rather than a passive process. The passive view of teaching looks the learner as 'an empty vessel' to be filled with knowledge, whereas constructivism states that learners construct meaning only through active engagement with the world (such as experiments or real-world problem solving).

Information may be passively received, but understanding cannot be, for it must come from making meaningful connections between prior knowledge, new knowledge, and the processes involved in learning.

3. All knowledge is socially constructed

Learning is a social activity - it is something we do together, in interaction with each other, rather than an abstract concept (Dewey, 1938). For example, Vygotsky (1978), believed that community plays a central role in the process of "making meaning." For Vygotsky, the environment in which children grow up will influence how they think and what they think about. Thus, all teaching and learning is a matter of sharing and negotiating socially constituted knowledge.

For example, Vygotsky (1978) states cognitive development stems from social interactions from guided learning within the zone of proximal development as children and their partner's co-construct knowledge.

4. All knowledge is personal

Each individual learner has a distinctive point of view, based on existing knowledge and values.

This principle appears to contradict the view thee knowledge is socially constructed.

(a) That although individuals have their own personal history of learning, nevertheless they can share in common knowledge, and

(b) that although education is a social process, powerfully influenced by cultural factors, Nevertheless cultures are made up of sub- cultures, even to the point of being composed of sub-cultures of one.

5. Learning exists in the mind

The constructivist theory posits that knowledge can only exist within the human mind, and that it does not to match any real world reality. Learners will be constantly trying to develop their own individual mental model of the real world from their perceptions of that world. As they perceive each new experience, learners will continually update their own mental models to reflect the new information, and will, therefore, construct their own interpretation of reality.

Main Types of Constructivism

The primary responsibility of the teacher is to create a collaborative problem- solving environment where students become active participants in their own learning. From this perspective, a teacher acts as a facilitator of earning rather than an instructor. The teacher makes sure he/she understands the students pre-existing conceptions, and guides the activity to address them and then build on them. Scaffolding is a key feature of effective teaching, where he adult continually adjusts the level of his or her help in response to the learner's level of performance. In the classroom, scaffolding can include modelling a kill, providing hints or cues, and adapting material or activity.

Features of Classroom

Tam (2000) lists the following four basic characteristics of constructivist learning environments, which must be considered when implementing constructivist teaching Strategies:

- Knowledge will be shared between teachers and students.

- Teachers and students will share authority.

- The teacher's role is one of a facilitator or guide.

- Learning groups will consist of small numbers of heterogeneous students.

Carl Roger – A Fully Functioning Person

Carl Roger's, fully functioning person is one who is in touch with their deepest and inner most feelings and desires. These individual understand their own emotion and place deep trust in their own instinct and urge.

Characteristics of a Fully Functioning Person

1. Openness to experience

2. Lack of defensiveness

3. The ability to interpret experience accurately

4. A flexible self- concept

5. Unconditional self- regard

6. Open to feedback and willing to make realistic changes

7. Lives in harmony with other people

8. Creative

9. Fulfilled life

10. Trust feeling

All individuals (organisms) exist in a continually changing world of experience (phenomenal field) of which they are the centre. The organism reacts to the field as it is experienced and perceived. This perceptual field "reality" for the individual. The organism reacts as on organized whole to this phenomenal field. A portion of the total perceptual field gradually becomes differentiated as the self. As a result of interaction with environment and particularly with others, the structure of the self is formed.

Carl Roger's theory consists of three component self- worth, self – image and ideal self. The ideal self is the person that you would like to be, the real self is the person you actually are. Roger focused on the idea that we need to achieve consistency between these two selves.

Self-Worth:

Comprises what we think about ourselves .Roger believed feelings of self-worth developed in early childhood and were formed from the interaction of child with the mother and father.

Ideal self and real self

The ideal self is the person you would like to be, and the real self is what you really are. In real world, a person's ideal self is not consistent with what happens in life with a person.

Self – Images

It involves how we see ourselves which is important to good psychological health. Self-image includes the influence of our body images on inner personality. As a simple level, we might perceive ourselves as a good or bad person, beautiful or ugly. Self-image affects how a person thinks, feels and behave in the world.

Education Contribution

Roger believed that every person could achieve their goal, wishes and desires in life. Then only self-actualization took place. A person reach the potential he will be satisfied fully he was the founder of humanistic psychology. He developed client centered therapy.

UNIT-4

INTELLIGENCE

Intelligence means the manner with which an individual deals with facts and situations. Intelligence is the aggregate or the global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment.

JEAN PIAGET

Intelligence is the ability to adapt to one's surroundings. Intelligence is the individual's capability by means of which the individual respond to the environment. Intelligence is an ability which integrate many skills like adjustments, learning, abstract thinking and comprehension.

NATURE OF INTELLIGENCE

People do well academically or succeed the intellectual tasks, we consider them to be intelligent. Intelligence is a person's ability to learn and remember information and recognize concepts and their relations and to apply the information and recognition by behaving in an adaptive way.

Intelligence is

1. *Ability to adjust*- Ability of an individual to direct his behavior towards a goal.

2. *Ability to learn*- Intelligence is the learning ability.

3. *Ability to do abstract reasoning*- An individual is intelligent as he is able to carry on abstract reasoning.

Characteristics of intelligent person

1. Learns fast and with ease

2. Good adjustment in behavior and capacity to solve problems.

3. He is capable of successfully completing difficult and complex task with high efficiency.

4. He perceives the appropriate solutions exist among objects or ideas.

5. He generally acts in pursuit at the welfare of the society.

The Concept of Mental Age

Binet conceived the idea of mental age to measure intelligence. Intelligence tests were made for different age levels. (If a test was passed by 60-70% of children of a given age, Binet accepted it for the age level). A child who successfully perform all the tasks for five year old child thus the child is taken to have a mental age of five; whatever his chronological age may be. A seven year old child having a M.A of six is considered as mentally deficient, but if he has an M, A of eight then he is aid to be above average in intelligence.

Intelligence Quotient (I, Q)

Intelligence Quotient is an index of intelligence. It is comparative index showing how a particularly child performs when compared with others of the same chronological age. It is computed as a ratio between Mental age and chorological age

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

To avoid fractions we multiply the result with 100.

IQ value 100 refers to normal intelligence values above 100 indicate high intelligence and value blow 100 refers low level of intelligence.

Classification of intelligence

| I.Q	- 140	and above Genius
	120 – 139	very superior
	110 – 119	superior
	90 – 109	average
	80 – 89	dull
	70 -79	border line
	Below 70	feeble minded
	50 – 59	Morons
	25 – 49	Imbeciles
	Below 25	Idiots

THORIES OF INTELLIGENCE

Two factor theory Spearman

This theory was advocated by Spearman in 1904. According to him every different intellectual activity involves a general factor 'g' which is shared with all the intellectual activities and specific factor 's' shares certain specific factors. G

belongs to the general intelligence which is common thread that run through all tasks that the individual performs through the course of his life. The amount of this g depends on the amount of cerebral cortex energy present. The individual uses this energy depends upon the environment, education, motivation and friend circle etc.

Apart from general factor 'g' an individual may have a specific ability to deal with a particular situation/ problem. This specific ability can be given as s1, s2, s3...etc. The ability of intelligence "A" of an individual can be expressed by following equation

$$g + s1 + s2 + s3 + ... = A$$
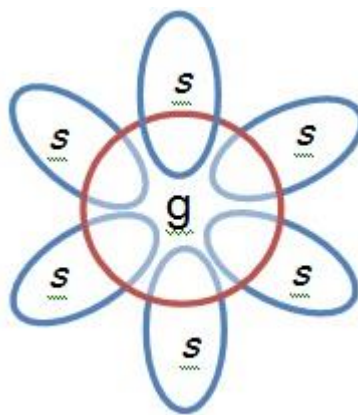
For example, an individual who is an IIT graduate could also be a good writer. An engineer has a general factor intelligence 'g' and a specific ability 's1' to crack the CET. An astronaut could have specific singing ability. Astronaut has a general factor intelligence 'c' and specific ability 's2' for singing.

According to Spearman, each task requires some specific ability. This view was not proper as it implied that there was nothing common in the task except a general factor and profession such as those of nursing, compounders, doctors could not be put in one group. In fact, the factor s1, s2, s3..... Etc. are not mutually exclusive. They overlap and give birth to certain common factors.

GUILFORD'S STRUCTURE OF INTELLIGENCE:
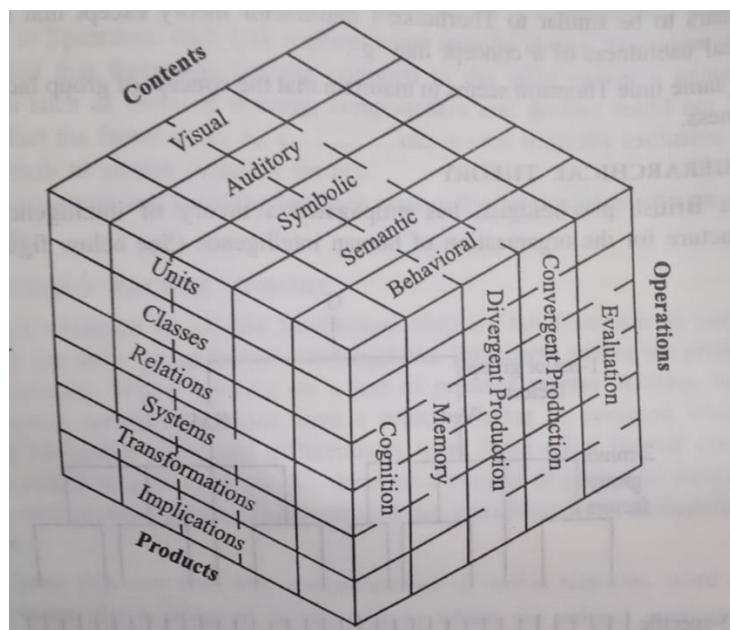
Guilford's structure of intellect model is a multiple intelligence theory. He believed that intelligence wasn't a monolithic, global attribute but a combination of multiple abilities, that were relatively independently. He applied factor analytical method to learn these mental abilities. According to him intelligence consists of several, intellectual abilities It was developed in 1956 (first version), intelligence as a collection of abilities or functions for processing different kinds of items of information in several ways.

Guilford's model included five types of mental contents, they are figural, symbolic, semantic and behavioral (1977). This dimension contains the broad areas of information in which operation are applied. It has divided in to five categories.

1. Figural

a. Visual = information arising from stimulation on the retina in the form of an image.

b. Auditory = information arising from stimulation of the cochlea of the ear as an image.

2. Symbolic- Information is perceived as symbols or signs that have no meaning by themselves. For example: the letters of an alphabet.

3. Semantic- Information perceived in words or sentences, whether oral, written or silently in one's mind.

4. Behavioral- As an act of an individual/individual's information is perceived.

OPERATIONS DIMENTIONS

This dimensions contains five kinds of operations or general intellectual process.

1. Cognition – Ability to understand, comprehend, discover, and become aware.

2. Memory – Ability to memorize information.

3. Evaluation – Process of judging whether an answer is accurate, consistent or valid.

4. Divergent production – Process of producing multiple solutions to a problem.

5. Convergent Production – Process of concluding a single solution to a problem.

PRODUCTS DIMENSION

This dimension contains result of applying particular operations to specific content. They are six types of products

1. Unit – Represents a single item of information.

2. Class – A set of items that share some attributes.

3. Relation – Represents a connection between items or variables; might be linked as opposites or in associations, sequences, or analogies.

4. System - An organization of items or networks with interacting parts.

5. Transformation – Change's perspectives, conversions, or mutation to knowledge; for example, reversing the order of letters in a word.

6. Implication – Predications, inferences, consequences, or anticipations of knowledge.

This model proposes that intelligence consists of 150 independent abilities that results from the interaction of five types of operations and six types of products. Guilford, 1982.

In this way, according to Guilford's model of intellect there are 150 factors operating in once intelligence. Each one of these factors has a trigram symbol, i.e. at least one factor from each category of three parameters has to be present in any specific intellectual activity of mental task.

THURSTON'S GROUP FACTOR THEORY

Louis Leon Thurston proposed his multiple- factor theory of intelligence in 1938. His multifactor theory of intelligence is based on the generalized concepts, formulas, and methods used by Spearman in his two –factor theory of intelligence. He stated that every individual possesses different levels of nine primary mental abilities, i.e. Word fluency, verbal factor, numerical factor, inductive reasoning, memory, spatial visualization and perceptual speed and these levels do not depend on each other and each of these abilities can be evaluated separately.

PRIMARY MENTAL ABILITIES

| V.F | S.F | N.F | M.F | W.F.F | I.R.F | D.R.F | P.F | P.S.A .F |

1. The Numerical factor

It involves the ability of an individual to do quick and accurate numerical computations. It can be measured by checking the accuracy and speed of person in solving various arithmetic problems.

2. The Verbal factor

It refers to the ability of the person to understand and use various words, sentences, language, or other verbal content pieces. This ability can be assessed through vocabulary tests, jumble word tests and verbal or reading comprehensions tests.

3. The Space factor

It refers to the spatial visualization of the person. This ability comes into play when the person tries to understand the manipulation of various real/imaginary objects in space. The test that measures this ability involves solving various kinds of puzzles, understanding various geometric figures, and identifying the correct mirror image of the object, or choosing the correct image of the object when it is rotated by different angles.

4. Memory

It refers to the ability of the person to quickly memorize the various concepts or phenomena and retaining them for a longer period of time. Various memory tests like asking the participants to learn nonsense syllables, and their ability to remember them could a measure of their memory factor. The ability to recall the learned concepts by the students during the exams is largely depend on this primary mental ability factor.

5. The verbal fluency / Word fluency factor

When a person is asked to rapidly speak several isolated words or sentences, then verbal fluency comes in to play; a person with high verbal fluency may excel in this task, while the person with low verbal fluency may have difficulty in this task. This factor is responsible for the communication skills of the person. The tests to measure this factor may involve asking participants to rapidly think of words that begin or end with a specific letter.

6. The Inductive Reasoning factor

This reasoning involves the ability to deduce a general principle from a specific concept. This ability is measured through various tests like number series, words series and classification of words or numbers. The inductive reasoning tests may involve selecting an appropriate number or image according to the sequential order of the given numbers or image series.

7. Perceptual speed factor

It involves the ability of a person to rapidly recognize and compare the specific image, numbers, or letters and to accurately proofread (know) various types of content. Tests like picture recognition, rapidly crossing specific letters from the series of numbers, and finding particular words in the paragraphs are used to measure the perceptual speed factor of the person.

8. The Deductive Reasoning factor

It involves the ability to accurately understand a specific phenomenon or concept from the generalized principle. Various aptitude test are available to test the deductive reasoning of a person that includes the various set of statements, and person has to choose the best possible logical solution according to the given statements.

9. Problem solving ability factor

It refers to the ability of a person to solve various general of aptitude problems. The factor can be assessed by analyzing the individual's responses to various hypothetical problem and their ability to reach the conclusion.

GARDNER'S THEORY OF MULTIPLE INTELLIGENCE

Howard Gardner has questioned the idea that the intelligence is a single entity, that it emerges from a single general ability, and that it can be measured by IQ tests. He viewed intelligence as the capacity to solve problems or to fashion products that are valued in one or more cultural settings. When Gardner

introduced the theory in his book "Frames of Mind" (1983), he suggested that each individual possess at least seven such relatively independent mental abilities or intelligences. The first two are the once that have been typically valued in schools; the next three are usually associated with arts; and the final two are what Howard Gardner called 'personal intelligence'.

1. *Visual/ Spatial Intelligence* is the ability to perceive the visual. Learners who possess this at a higher level tend to think in terms of pictures, they can create vivid mental image to retain information. They enjoy closely observing maps, charts, pictures, videos and movies.

Their skills include:

Puzzle building, studying charts and graphs, a good sense of direction, sketching, painting, creating visual metaphors and analogies (perhaps through visual arts), manipulating images, constructing, fixing, designing practically useful objects, interpreting visual images.

Possible career interests;

Persons with high spatial intelligence will make efficient navigators, sculptors, visual artists, inventors, architects, interior designers, mechanics, and engineers.

2. *Verbal/Linguistic Intelligence* is the ability to use words and language. Learners who are high in this have highly developed auditory skills and are generally elegant speakers. They think in words rather than pictures.

Their skills include:

Listening, speaking, writing, storytelling, explaining, teaching, using humor, understanding the syntax and meaning of words, remembering information convincing someone of their point of view, analyzing language usage, flow and fluency of words, using appropriate words, etc.

Possible career interests:

Poet, journalist, writer, teacher, lawyer, politician, translator.

3.Logical/Mathematical Intelligence is the ability to use reason, logic and numbers. Learners who are high in this think conceptually in logical and numerical patterns making connections between pieces of information. Always curious about the world around them, these learners ask lots of questions and like to do experiments.

Their skills include:

Problems solving, classifying and categorizing information, working with abstract concepts to figure out the relationship of each to the other, handling long chains of reason, doing controlled experiments, exploring and wondering about natural events, performing complex mathematical calculations, working with geometric shapes, interpreting and appreciating numbers patterns and combination, etc.

Possible career paths:

Scientists, engineers, computer programmers, researchers, accountants, mathematicians

4.Bodily/Kinesthetic Intelligence is the ability to control body movements and handle objects skillfully. Learners who are high in this express themselves through movement. They have a good sense of balance and eye-hand co-ordination, (e.g. ball play, balancing beams). Through interacting with the space around them, they are able to remember and process information.

Their skills include:

Dancing, physical co-ordination, sports, hands on experimentation, using body language, crafts, acting, miming, using hands to create or build, expressing emotions through the body, smooth and rhythmic movements.

Possible career paths:

Athletes, physical education teachers, dancers, actors, firefighters, artisans, circus artists.

5.Musical/Rhythmic Intelligence is the ability to produce and appreciate music. These musically inclined learners 'think' in terms sound, rhythms and patterns. They spontaneously respond to music either by appreciating or criticizing what they hear. Many of these learners are extremely sensitive to environmental sounds (e.g. sounds produced by crickets, bells, dripping taps).

Their skills include:

Singing, whistling, playing musical instruments, recognizing tonal patterns, composing music, remembering melodies, understanding the structure and rhythm of music, modulating voice in tune with emotions.

Possible career paths:

Musicians, singer, composer

6.Interpersonal Intelligence is the ability to understand others, interact with them and establish pleasant relations. Such learners try to see things from other people's point of view in order to understand how they think and feel. They often have an uncanny ability to sense feelings, intensions and motivation of others and can empathize with others. They will be great organizers, although they sometimes resort to manipulation. Generally they try to maintain peace in group settings and encourage co-operations. They use both verbal (e.g. speaking) and non-verbal language (e.g. eye contact, body language) to open communication channels with others.

Their skills include:

Seeing things from another person's perspective (dual perspective), patient listening, empathizing, understanding other people's moods and people's motivations and intensions, communicating both verbally and non-verbally, building trust, arriving at peaceful resolution for conflicts; establishing positive relations with other people.

Possible career paths:

Counselor, salesperson, politician, business person, social worker, volunteer of social service organizations.

7.Intrapersonal Intelligence is the ability to self-respect and be aware of one's inner state of being. Learners having high interpersonal intelligence try to reflect upon their inner feelings, dreams, relationships with others, and strengths and weaknesses. Thus they will develop healthy self-concepts.

Their skills include:

Recognizing their own strengths and weakness, reflecting and analyzing themselves, acquiring awareness of their inner feelings, desires and dreams, evaluating their thinking patterns, reasoning with themselves, understanding their role in relationship to others.

Possible Career Paths:

Researchers, theorists, philosophers, religious workers.

Later, Gardner has added an eighth intelligence- naturalist intelligence- to his list in intelligence reframed (1999).

8. Naturalist Intelligence is the ability to recognize and categorize plants, animals and other objects in nature. Farmers, gardeners, botanists, geologists, florists, and archeologists all exhibit this intelligence.

Their skills include:

Closely observing all the natural phenomena in the immediate environment and later in distant places; internalizing all the salient attributes of various natural phenomena; constructing mental images of natural phenomena; identifying various plants animals and other creatures by observing relevant attributes, classifying classes and categories; being able to describe the salient characteristics of natural phenomena- both external and internal.

Possible career path:

Agriculturist, Botanist, Gardner, Geologist, Archeologist, Organizer of nurseries for plants, pets, etc.

THRONTIKE MULTIFACTOR THEORY OF INTELLIGENCE

According to him intelligence is nothing more than a convenient name for almost infinite number of actual or potential specific connection between the stimulus and response. He opposed general intelligence and proposed that they are specific stimuli and specific response.   Intelligence is said to be constituted of multitude of separate factors or elements or ability. A mental act involves a number of these minute elements operating together.   If any two tasks are correlated, the degree of correlation is due to the common element involved in the two tasks.

Attributes of intelligence

They are four attributes of intelligence level, range, area and speed.

Level –This refers to the difficulty of a task that can be solved. If we think of all test items are arranged in a sequential order of increasing difficulty, then the height that we can ascend on this ladder of difficulty determines our level of intelligence.

Range – This refers to the number of tasks at any given degree of difficulty that we can solve. The individual processing a given level of intelligence should be able to solve the whole range of task at that level. Range is determined not only by the breadth of experience and by opportunity to learn. In intelligence test,range is represented by items of equal difficulty.

Area – It refers to the total number of situations at each level to which the individual is able to respond. Area is the summation of all the ranges at each level of intelligence processed by an individual.

Speed –This is the rapidly with which an individual can respond to items.

People differ in their ability to perform any specific act in terms of the level of difficulty they can manage. They also differ in the range or number of tasks they can or cannot perform.

Throntike classified intellectual ability into three categories social intelligence, concrete intelligence and abstract intelligence. Social intelligence is the persons ability to understand and manage interpersonal relationships ability to understand, feeling, thought and behaviour of other people. Concrete

intelligence is the ability to understand and manipulate objects. Abstract intelligence is the human enquiry of both neural, cognitive, functional and logical thinking.

Classification of intelligence tests

Intelligence tests are of various kinds. They have been classified from different points of view.

1. Classification on the basis of the number that take the test at a time.

On the basis of the mode administration intelligence tests have been divided into two classes

Individual tests

These tests are administered to one individual at a time. They include performance test as well as tests that require linguistic ability. These tests are particularly appropriate for testing individuals, but they are not financially feasible as they are expensive. Intelligence test are time consuming, Administration of such tests require more expert training. Example Stanford Binet intelligence test, Wechsler Bellrnre Intelligence Test, Koh's Block Design test etc.,

Group test

In this category the tests are administered upon a large number of examinees simultaneously. Group test are more objective and less expensive. But in these test no rapport between the subjects and examines. These tests are more useful for the purpose of educational and vocational guidance. In group test vocabulary items, word analogies, sentence completion items, test of mathematical reasoning, number series, classification, picture arrangement, memory for design, paper pencil test etc,

Eg., Army Alpha Test,

Army Beta Test- It is non verbal test

Army Alpha test-this test has time limit.one who complete the test quickly and accurately are considered as intelligent.

Advantages of group test

In group test

- They are conducted same time, so they are economical.

- Administration is easy.

- Lot of students at one time.

Disadvantages

- Depth study is not possible in group test.

- It is similar to school examination, so students feel negative attitude towards test.

- In group test, time limit, so it creates tension to tastes.

- If it is conducted for children, they face reading difficulties.

Performance Test

- In performance test, there is no need for language.

- It is mainly conducted for illiterate people. Example: Koh's Block design test, Pattern drawing test, immediate memory test for digit.

2. Classification based on the medium used

In terms of medium used, intelligence tests are divided into two categories

1. Verbal tests:-

In this questions are asked in oral or in written form of a given language. It cannot be used for testing individuals who lack language ability and small children. It is less expensive, standardization, administration and scoring are easy.

2. Nonverbal test:-

These test do not require the use of language but could be manipulated using figures, pictures, blocks or even other objects. It is more expensive. These tests can be used for testing subjects who lack language ability.

Uses of intelligence test:

1. It provides educational and vocational guidance.

2. Mental abilities of children are identified.

3. Classifying children, according to their mental ability.

4. Identify causes of backwardness.

5. Predicting individual for future progress.

6. Selecting individual for various job.

7. Research in psychology and education.

8. Clinics and mental hospitals for treatment.

Creativity

Creativity is the capacity or ability of an individual to create, discover or produce a new or novel idea or object, including the rearrangement or reshaping into a new form of what is already known to him. Creativity may involve either all the three or any of the three processes, namely- (1) Explanation, (2) Prediction, and (3) Invention. These can be distinguished by the different goals behind each of them.

In explanation, the goal is to seek an understanding of why a specified event has occurred. In prediction, certain conditions are given and the goal is to understand the sequence of these conditions, to anticipate an event that has not happened. In invention, the goal is to create a novel set of conditions that will result in the specified event.

Nature of Creativity

Creativity possesses the following characteristics:

1. *Creativity is universal:* Creativity is not confined to any individual, sex or caste. It has no boundary of age, location or culture. It is universal in nature.

2. *Creativity is innate as well as acquired:* Creativity is not merely a hereditary factor. It can be nourished and nurtured by proper training.

3. *Creativity carries ego involvement:* No other person can experience the same warmth, happiness, and satisfaction of the creation as the creator. One's individuality and identity are totally merged in one's creation.

4. *Creativity rests more on divergent thinking:* Creativity is the result of adventurous thinking and a departure from closed thinking.

5. *Creativity is not completely spontaneous:* Creativity requires constant understanding, hard work and patience to produce something new and unique.

Stages in creative process

Creative process involves four distinct stages. They are preparation, incubation, illumination and verification.

1. Preparation:

During the preparatory period, the attention of the creative individual is finding a problem and solving it. At this stage the creative person studies, analyses, learns and tries to relate the findings in many ways. He analyses the problem, incisively collects and matches the data and tries to create novel ideas which are relevant to the problem and solves it.

2. Incubation:

At this stage no deliberate activity is done or proposed by the individual. During the period one is taking rest and relaxed and his mind wanders freely. Unconscious activities can also arise during this period, but it can be altered and reorganized during this time.

3. Illumination:

Illumination means giving light. Sudden flash of insight and judgment occur during this period. Sudden ideas occur at any time in the individual's mind. Ideas also occur after having enough experience. Example: Archimedes discovery.

4. Verification:

At last the creative individual compares the tests and evaluates his ideas, products or results. He submits his critical appraisal. Verification may lead to

further preparation and contemplation and finally lead to another inspiration to create a better new creation. The four stages represent a scientific and systematic way of analyzing the ideas for a higher creative process.

Fostering creativity among children

1. Brain storming: In this technique the individual is free to express his ideas continuously without inhibition. In this method greater chance for delivering original ideas of the person or developing creativity and new interventions.

2. Develop healthy study habits and self-learning among students

3. Curiosity of the students should be respected by the teacher and satisfied by giving affection.

4. The curriculum should organize to develop creativity among children.

5. The teacher allowed the students to solve the problem in their own way.

6. Examination should be conducted to the students to develop creative thinking among students.

7. Teacher should respect imaginative ideas, unusual questions and creative works of the students.

Critical thinking

Critical thinking is the ability to think clearly. It means it is a disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning or communication, as a guide to belief and action.

Critical thinking—reasoning- evaluating- problem solving-decision making-analyzing.

Critical thinking skills involve analysis, interpretation, inference, evaluation, explanation, self-regulation, communication, creativity, open-mindedness, problem solving.

Importance of critical thinking

Critical thinking helps the people better understand themselves, their motivation and goals. When you can deduce information to find the most important parts and apply those to your life, you can change your situation and promote personal growth and overall happiness. It is important for self-development.

Steps in critical thinking

1. Identify the problem or situation

2. Gather data, opinions, and arguments

3. Analyze and evaluate the data

4. Identify assumptions

5. Establish significance

6. Make a decision or reach conclusion

UNIT -5

PERSONALITY

Meaning of the term 'Personality'

The term **'personality'** has been derived from the Latin word 'persona' which refers to the facial mask worn by Roman actors on the stage. It was the masked face, that the actor presented to the audience and perhaps this mask, determined how a person is perceived by others and how he affects other people. Each person has a unique and relatively stable, persisting organization of characteristics that go to make up his individual personality. Personality refers to the "totality of what a person is", which includes all traits (physical, psychological as well as a variety of acquired habitual traits) blended or organized within him in a characteristically unique manner that determines his modes of behaviour and his adjustments to the environment.

Definition of Personality

"An individual's personality is the resulting individuality arising out of the interaction of a self-conscious and intelligent person and the environment in which he lives". (F.S. Freeman)
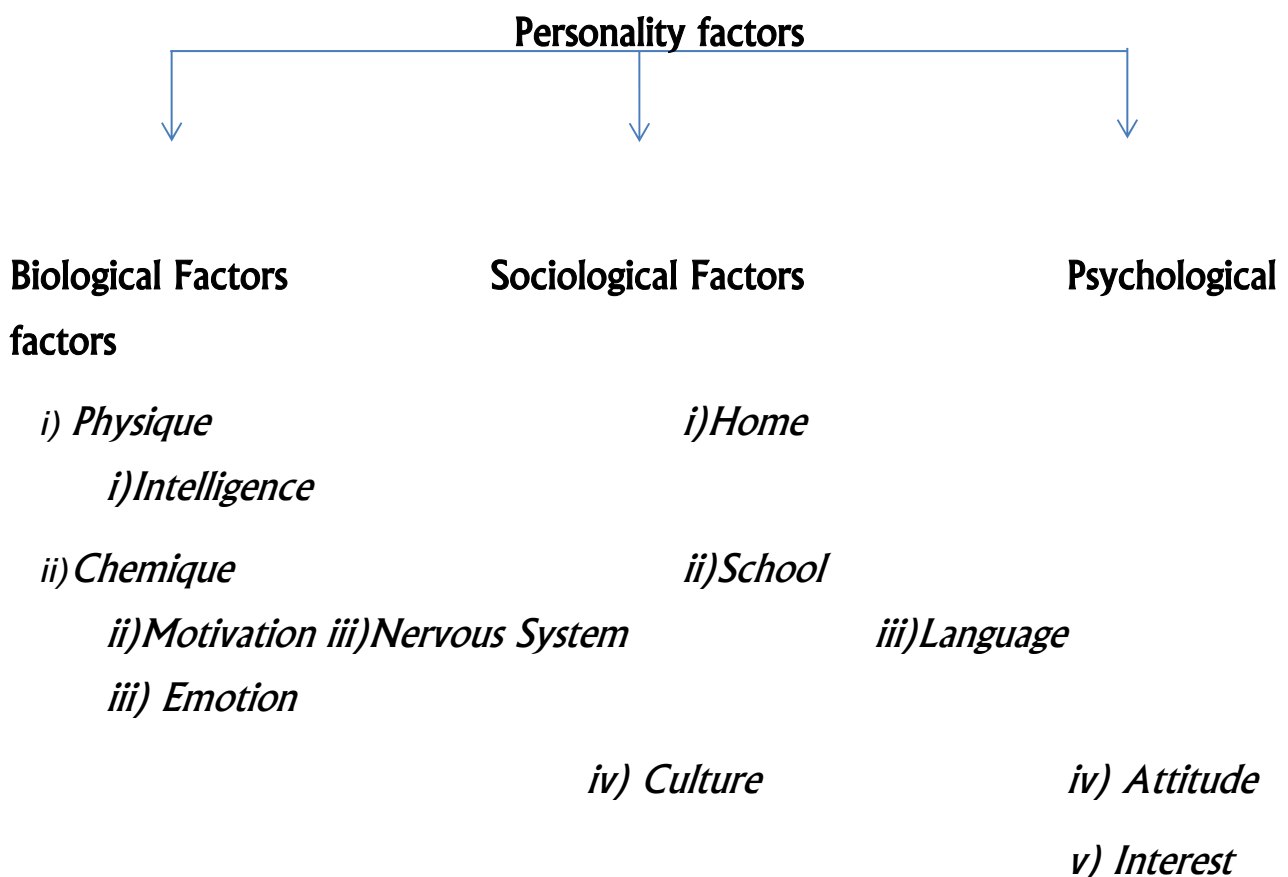
Characteristics of Personality

i)   Personality is self-consciousness.

ii)   It is through and through social.

iii)   It is dynamic.

iv)   It is the product of heredity and environment.

v)   It is adjustable or modifiable.

vi)   It is unique.

vii)   It is integrated and functions as a whole.

viii) It is assessable.

Factors influencing personality development

Man, the social animal has both a body and mind. His personality is influenced by biological, psychological and social factors. These three major factors and their subcomponents are given below,

Personality factors

Biological Factors factors

i) *Physique*

   i)Intelligence

ii)*Chemique*

   ii)Motivation iii)Nervous System

   iii) Emotion

Sociological Factors

i)Home

ii)School

iv) Culture

Psychological factors

iii)Language

iv) Attitude

v) Interest

Among these factors some are due to heredity and others arise due to environmental influences. Among the heredity factors most important are biological factors and some of the psychological factors like intelligence.

Biological Factors

There are three biological factors in development. They are

1. **Physique:** Height, weight, physical appearance, physical strength, general health, physical deformities and abnormalities influence the personality of an individual not directly but indirectly. The child who is short and physically handicapped may develop a feeling of inferiority. The crippled persons are emotionally unbalanced. The bodily differences do influence a person's behaviour. The fat person may be somewhat lethargic while the lean and thin person may be a bit more active. Everyone likes beautiful objects and persons; those who are ugly are discarded. All these things greatly affect one's self- estimation or self-concept which is intimately related to the development of personality.

2. **Chemique:** Chemique is meant the possible effects of the ductless glands on the personality development. Thyroid gland secretes a chemical known as thyroxin, which controls rate of growth. When the gland is underactive the individual becomes lethargic and despondent. When this gland is overactive, the individual becomes restless, irritable and unstable. The parathyroid gland produces calcium salts. When this gland is underactive, the individual becomes excessively high at

activity level. When this gland is overactive, the individual becomes quiet and slow in activities. The other glands like the pituitary, the sex gland, and the adrenal gland affect the behaviour of the individual and then his personality. These ductless glands do interlocking activities; they are stimulating one another, inhibiting one another and compensating one another. They play an important role in bodily, mental, and emotional development.

3. Nervous System: The efficiency of the sensory organs depends upon the well-developed quality of the nervous system and we know that the sensory organs are the gateways of knowledge. Our intellectual efficiency, physical power, patience, the quickness of adjustment, the readiness of acquiring new modes of responses, our reasoning and thinking all depend on the efficiency of the nervous system. Any injury to the system will affect the personality of the individual.

Social Factors

Home, school, language and culture are the most important sociological factors in influencing one's personality.

Home

The different forces which influence the personality in a home are:

1. Parental attitudes towards their children: Parental rejection (unwanted children), over-protected children, the only one child in the family, children left in the care of the servants, etc. lead to distorted personality development.

Broken home, separated or divorced parents, alcoholic parents, and quarrelsome parents etc. decisively affect the personality makeup of the children.

2. Over-ambitious parents: Over-ambitious parents want their children to achieve something which is beyond their capacities. The result will be failure, loss of self-respect, feeling of quilt and shame.

3. Parental preference on the sex of the child: Most of the parents have strong preference for boys in our country. This results in pampering of the male children and neglect of female children, which is highly unhealthy for the optimum personality development of children.

4. Step- parents: Loss of any one or both parents, children under the care of step parents, children living in orphanages, etc. are mainly responsible for stunted growth and personality make up of children.

5. Number of children in the family: Only child as well as over-crowded homes will have different kinds of undesirable impact on the development of personality of children.

6. Educational and socio-economic status of parents: Educational and socio-economic status of parents do have a telling effect upon the personality development of their children.

7. Other factors at home: Child-rearing practices such as breast-feeding versus bottle- feeding, early versus late weaning, severe versus permissive toilet training,

authoritarian versus democratic way of treatment at home will have a lot to do in shaping and developing the personality of the children.

School

Various factors in the school are responsible in shaping the personality of the children. They are (i) personality of the teachers; (ii) discipline of the school; (iii) opportunity available for various curricular and co-curricular activities (iv) size of the school and the organizational climate in the school, etc.

Culture

The culture in which a child is reared exerts the broadest kind of social influence on him. Each individual wants to succeed in his cultural group in the three important components occupation, marriage, and interpersonal relationships. These are largely shaped by the different social agencies. Cultural differences in living habit like mode of dressing, eating, attitudes to marriage, methods of bringing up children, family life, values system, beliefs, etc. affect the moulding of personality pattern of the individual. It is also true that geographical differences also contribute to cultural differences and hence geographical environment also indirectly plays a role in shaping the personality of an individual.

Psychological Factors

One's intelligence, motivation, attitude, emotion interest and sentiment are the important psychological factors that affect the personality development.

i) Those who have significantly low level of intelligence like the 'slow learners' and 'mentally handicapped, differ much in personality as compared to normal individuals.

ii) Well motivated persons exhibit high involvement in the tasks they undertake and succeed very quickly. People with low motivation have significantly low level of achievement. Thus, motivation also contributes to the difference in personality among people,

iii) Emotionally matured persons are highly cultured and they easily get along with other people. Those who lose emotional balance are not liked by others and hence get isolated. Experimental findings reveal that emotional growth is a significant determinant of personality

Like other psychological factors, interest, attitude and sentiment too affect one's personality. Those who have high interest and positive attitude undertake their tasks with ego involvement. Those with negative attitude and lack of interest do not perform well. Thus biological, social and psychological factors serve as the major determinants

Theories of Personality

Psychologists have put forth a number of theories to explain the structure and development of personality, of which the following are important.

- Typological Theories

- Trait Theories

- Psycho-analytic Theories

- Social learning Theories

- Phenomenological and Humanists Theories

Three Major Approaches in Describing Personality

Psychologists adopt the following three major approaches to describe personality.

1. **Type-approach:** This approach to personality attempts to classify people according to their psycho -somatic types or some central themes like leadership style, value etc.

2. **Trait-approach:** The trait-approach attempts to list a number of basic personality traits and the personality of an individual can be described by its position on a 7- or 9- point scale, in each of these units.

3. **Type -cum -Trait Approach:** This approach integrates the type and trait approaches to describe individual's personality. In this hierarchical approach, starting with the basic categories of personality, the corresponding traits for each personality category are identified in the next level and finally ending with specific behavioural responses for each trait. Eysenck's theory of personality is a typical example for this approach.

Type Approach to Personality

Type approach to personality attempts to classify people into a few types, each characterising certain styles of life, which gives it a separate identity.

Galen's Classification

Galen has classified people into four types according to their temperament as (1) Choleric (irritable) (ii) Melancholic (sad) Phlegmatic (sleepy) and (iv) Sanguine (smiling).

Kretchmer's Classification

Earnest Kretchmer, a German Psychiatrist refers to three broad types of human personality based on bodily build. The three types of personality and their characteristics are presented below in the Table

No	Body build	Personality type	Main characteristics
1.	Thin, long limbed and narrow chested	Aesthetic Type	They are weak person. Their bones, muscles, face and trunk are weak. They are moderate in weight and are long, slim and leaner and also lack fat and muscles.
2.	With strong and sturdy limbs and muscles	Athletic Type	Strong growth of the muscular, skeleton and skin, these people will have muscular bodies and are vibrant and assertive. They are very strong.

3.	Short fat and barrel chest	Pyknic type	Peripheral growth of the body cavities (breast, head and stomach), they also have a more refined construction of motor instrument (limbs and shoulder), the pyknic type obesity is limited for most part of the body.

Spranger's Classification

Edward Spranger: a German philosopher divided the basis of values (or) interest in the human beings, on following six categories:

i) **Theoretical:** Persons who are theoretical in nature, neglect social and political participation.

ii) **Economic :** Those persons who are interested in money-hoarding

iii) **Aesthetic:** Those persons who love beauty and are busy in sensuous gratification

iv) **Social:** Persons who are interested in social activities.

v) **Political:** Dominating and desirous of power.

vi) **Religious:** Persons who devote themselves to religious activities and mysticism.

Sheldon's Classification

Dr. William H. Sheldon, an American Surgeon, classified human beings into three broad categories of physical dimensions and their corresponding temperamental characteristics. The three personality types are

a) Endomorphic (round, fat and soft)

b) Ectomorphic (delicate, lean and linear body build)

c) Mesomorphy (hard and muscular).

Endomorphic individuals have the type of viscerotonia, Mesomorphs have somatotonia and Ectomorphs have Cerebrotonia.

Temperamentally Viscerotonia implies love of leisure, desire for enjoyment, desire for food and sleep, interest in child-hood experiences, etc. Cerebrotonia implies disciplined behaviour, ready response to stimulation, lack of interest in social interactions, hypersensitivity to pain etc.

Somatotonic personalities exhibit persistence in behaviour, desire for adventure, courage, indifference to pain, involvement in actions, etc. Sheldon points out each type of body dimension for an individual may be rated on a 7-point scale and the normal physique will be 4-4-4.

Sheldon's Classification of Body Types

Body Type	Personality Type	Typical Traits
Endomorphy (tendency toward roundness and softness)	Viscerotonia	Fond of food, inclined to eat too much, apprehensive, insecure, amiable, sleeps well, conforms to social conventions
Mesomorphy (predominance of muscle and bone)	Somototonia	Adventurous, likes strenuous exercise and cold showers, dresses informally, withstands, pain easily and willingly.
Ecomorphy (fragility and linearity in body build)	Cerebrotonia	Asocial, unamiable, lacks desire for exercise, non-adventurous, does not withstand pain easily.

One serious objection to such views is that changes physique often occurs for individuals at middle age but this is not often accompanied by any changes in personal characteristics.

Lippitt's Classification

Lippitt and White have identified three types of personality based on the following three leadership styles.

No	Type of personality	Characteristics
1	**Authoritarian**	Forces his decisions ruthlessly with power on others
2	**Democratic**	Seeks consensus while taking decisions
3	**Laissez-faire**	Everyone acts on his own; the leader has no power or control over others

Orgburn's Classification

Sociologists like Ogburn classify human personality as (i) Revolutionist (ii) Leader

(iii) Proud (iv) Gambler and (v) Exhibitionist

Jung's Classification

The most popular personality types are those introduced by Carl Jung- Extroversion and Introversion. One who exhibits extroversion is an extrovert and opposed to him is the introvert. The extrovert is

readily susceptible to external stimulation; he likes to get deeply involved in social activities: he is not very much bothered by outside criticisms; he displays his emotions openly, is less worried about failure and lacks the power of self-criticism. But the introvert is immersed in his own thoughts, memories and imaginations and is indifferent to social situations. He often tends to conceal his emotions, is highly sensitive to criticisms and deeply upset by failure. He is invariably self-centered. This classification has been criticised on the ground that in general people have characteristics of diversion and introversion mixed in them at different levels and exhibit one type of characteristics dominantly in one situation and the other set of characteristics in yet another situation. Nobody is a perfect extrovert or an introvert.

Indian Classification

Indian philosophers talk of three types of personality

a) Sathva: Exhibits patience and celibacy is such spoken, gentle, honest and truthful

b) Rajo: Assertive, dominant: valiant, heroic and ambitious

c) Thamo: Indulges in sensuous pleasure excessively, untruthful, criminal and self-centered In ancient India we had an advanced system of Ayurveda in which our ancient physicians broadly classified all human beings on the basis of three elements in the body. The

predominance of one of the three decided the category of the person. The three elements which the Indian physicians theorized are pitt (bile), bate (wind) and kut (mucus).

Limitations of the Type-Approach

Type approaches have obvious limitations. Few people fit into such distinct types easily Jung himself says that most persons appear to be atypical or ambiverts. Ever introversion-extroversion now appear to have aspects at one who is introverted in social activity may not be equally so in his thinking. It should be noted that type approach tries to describe practically useful distinctions among persons but such distinctions are only relative Human personality is too rich and often too unusual to be described in one or two general types.

Trait-Approach to Personality

Meaning of the term 'Trait

A personality trait is an enduring and consistent characteristic of a person that is observed in a wide variety of situations. Such terms as intelligence, emotional sensitivity, ascendance, submission, irritability, warm, etc. are personality traits.

Cattell's Trait Approach to Personality.

Cattell has identified 12 independent or Primary and 4 Secondary

traits that describe the complete personality of an individual. There are 16 personality factors which are bipolar (referring to the opposite or extreme degrees). They are:

Primary Traits:

1. Intelligence- Stupid

2. Emotionally- Changeable

3. Dominant - Submissive

4. Cheerful- Unhappy

5. Sensitive- Hard Boiled

6. Thoughtful and aesthetic- Boorish and coarse

7. Co-operation- Reserved

8. Genial- Hostile

9. Vigorous- Slack

10. Hypersensitive- Phlegmatic

11. Friendly- Suspicious

12. Conscientious- Slipshod

Secondary Traits:

i) Conservative- Experimenting

ii) Group dependent- Self dependent

iii) Controlled - Uncontrolled

iv) Relaxed -Tense

Cattell named these 16 personality traits as 'Source traits' differentiating them from Surface traits which are easily observable, but the real traits are source traits which represent a deeper unity than that revealed surface traits.

Eysenck's Type Personality

Eysenck provides a hierarchical type approach personality combining both the type and trait approaches He describes three basic categories of personality at top of the hierarchy.

Extroversion - Introversion, Neuroticism-stability, psychotism-normality

These have been ultimately reduced to two dimensions namely, stable -unstable, and introversion extroversion. Each of these categories involves certain qualities at the next lower or trait level. For example, the traits of an introvert would include such qualities as persistence, rigidly of approach, subjectivity, etc. These traits in turn are associated with the next habitual response level for example, we may expect an introvert to be persistent tasks like problem solving, etc generally. The last is the specific response level which applies to specific tasks in which also the traits involved in the categories would be expressed in diverse degrees.

Eysenck's approach hierarchical with the top indicating types and lower traits

Type level in personality

|

Trait level

|

Habitual response level

|

Specific response level

Characteristics of "Extroverts and "Introverts

Extroverts are described by Eysenck as "outgoing relatively uninhibited, fond of activities which bring them into contact with other people, not attracted by solitary pursuits like study, crave for excitement, are aggressive, unreliable, easy going and optimistic.

Introverts have the opposite trails such as inward highly reserved, shy, like to be aloof, attracted by solitary pursuits like study, rigid, highly reliable, persistent, and realistic (in the type approach of Jung also we have these categories) Eysenck's research finding also lend support to the existence of extroverts and introverts.

Merits and Limitations of Trait Approach

Usefulness of Trait Approach

(i) Trait ratings are useful in the selection and placement of persons in courses, jobs, etc.

(ii) Any cumulative record listing important personality traits is of value in the academic evaluation as well as educational and vocational guidance

Limitations of Trait Approach

Trait approach to personality is criticized on the following counts

1) It does not describe how the traits are organized (or coordinated) within the individual.

2) There may be interaction of different types of traits and further any trait has to be appraised according to a range of situations and circumstances. These are not accounted for in the trait approach. For example, boys rated high in "aggressiveness" were not founds aggressive under all types of provocations.

Freud's Psycho-analytic Theory of Personality

Freud's theory of personality is based on the following two fundamental principles:

1) Structure of personality consists of three components which function independently and at the same time affect each other by their mutual

interactions. They are (i) 'Id' the unconscious mind (ii) 'Ego, the conscious mind which corresponds to the self and (iii) Super ego which gets developed by the parental standards and the moral standards of the society.

2) Human mind operates at three levels viz. (a) Conscious (b) Unconscious and (c) Preconscious or sub conscious which lies in between the conscious and unconscious.

1. Id: It is the inborn reservoir of primitive psychic energy called "Libido' which is completely unconscious and which demands immediate satisfaction of its unfulfilled desires (mostly sexual in nature) and instincts, on the basis of what is known as 'pleasure principle' regardless of external reality. Id is the original source of personality from which ego and Super-ego develop. All the energy of human behaviour, says Freud, is provided by inborn id instincts namely sex and aggression, which he later spoke of as 'Life Instincts' (Eros) and 'Death Instincts' (Thanatos) Personality is moulded by the way in which a person attempts to resolve the conflicts between the Id's demands for immediate gratification of these instincts and Social Constraints.

2. Ego It develops out of the Id because of the need of dealing with the real world around the individual. Ego corresponds to the 'self and represents reason in unreasonable demands of the id in check. In fact, it

the unreasonable demands of ld and the restrictions down by the Super Ego and as such it is the executive agency of personality, deciding what actions are appropriate.

3. **Super-Ego:** It is the system developed in the individual by incorporating parental standards and the moral standards of the society as perceived by the ego. It is the internalized representation of social and moral values and it most nearly corresponds to what is known as conscience.. The personality of an individual gets shaped in the following two ways based on how efficiently his/her Ego is able to balance the la and Super-Ego.

(i) Those who have a strong Ego which succeeds in balancing the Id and Super- Ego will have a healthy and balanced personality.

Maladjustment- may get expressed in two ways the Super Ego' is powerful than the 'Id', the unconscious desires and instincts get suppressed as a result of which the individual may develop Neurotic behaviour.

i) If the id is more dominant than the Ego, then the individual may indulge in unlawful activities become a delinquent.

Freud, while attempting to explain personality in terms of the functioning of the three sub-systems ie. id. Ego and Super Ego, emphasized the importance of the fulfilment the sex instinct Freud considered sex as life energy and the fulfilment of sex instinct is one of the primary needs of

man. How far one's sex instinct is satisfied, determines the status of personality development of an individual knowing one's behaviour expressive of sex instincts satisfaction, we can judge at what stage of personally development he is at.

Freudian Stages of Personality Development

Freud postulated that since birth an individual passes through four stages of psychosexual development. The first stage is called the oral stage which spreads over the first year of life, during which the child derives pleasure through acts such as sucking, biting, etc. involving the mouth. The 2nd and 3rd year of life of the child is covert by what is called the anal stage since pleasure centres around this region at that time. This period corresponds the period of toilet training and if anxieties are felt due the method of toilet training, this might sow the seed of development of anal syndrome and marked by except conformity and compulsiveness.

The anal stage is followed by the phallic stage (between 4 and 5 years). Here the genitals become the source of pleasure. It is during this period; the young boy manifests love towards the mother and views his father as a competitor for his mother's love. He starts imitating his rather to win his mother's love and in that way he learns his sex role. Similarly, a girl develops a desire for the father.(Fried called these as Oedipus complex and Electra complex). Difficulties in development during this

stage may lead to various forms of sex deviations.

The phallic stage is followed by a period of dormancy known as the "latency period" which is marked by a lack of interest in sex. Coinciding with puberty and adolescence, marked by physical and sexual maturity is the stage known as the genital stage. This lasts up to adult years. Again, pleasure centres around the genitals which now are meant to establish stable, long term sexual relationships.

Social Learning Theories of Personality

Unlike psycho-dynamic theories of personality, social among theories say that behaviour is situation-specific. Social learning theories try to integrate learning theories with personal and social behaviour and point out that behaviour la malleable. Consistency of behaviour results not from rigid personality traits but from other factors like environmental stability (Physical and social life being routine), Intermittent reinforcements etc. Social learning theories base their views upon the objectively stated and empirically tested principles of learning enunciated by Skinner, Hull and others. Dollard and Miller also made use of four basic concepts made familiar by behaviorist learning theories to explain how personality is acquired. These are:

1) Drive (stimulus, impelling one to act)

2) Cue (a stimulus that provides direction to behaviour)

3) Response (any internal or external behaviour)

4) Reinforcement (any event that increases the likelihood of a particular response)

Dollard and Miller point to fear as an important factor in personality development as it acts as a powerful motive or drive in the promotion of learning. Responses that are related to escape or avoidance of fear are important components of personality.

The personality theory of Bandura, Walters and Mischel is also a social learning approach. They emphasize the importance of social and intellectual factors as well as the role of observational models in the development of personality. Individual differences in personality arise from variations in learning conditions and in models observe and imitated. A person's behaviour depends upon the specific nature of the situations, how the situation is appraised by him as well as past reinforcements of behaviour in similar situations. The Experimental approaches to personality have mainly developed from social learning theories. Instead of trying to interpret personality as a whole the approach asks specific questions like, 'what is the effect anxiety on performance? What circumstances lead aggressive behaviour in a child? Etc. and tries to experimentally find answers to such questions.

But the major limitation of social learning theories is that they do

not assume any purpose or long-term goals in behaviour and completely ignore the stability and consistency in behaviour.

Phenomenological theories of personality

Phenomenological theories of personality or humanistic conceptions of personality emphasize the existence of positive growth promoting forces in personality beyond mere conflict resolution or tension reduction and also stress present rather than past experiences. The views of Abraham Maslow and Carl Rogers come under this category.

Carl Roger's Theory of Personality

Carl Rogers developed his personality theory from his experiences in helping troubled individuals His non- directive or client-centered counselling is based on his view of human personality, which is humanistic and optimistic. Rogers believes that every person has motivation and ability to change and only needs help to facilitate his progress The most important concept in Roger's theory of personality is "self "and this includes all that characters of I or Me. An individual with a strong positive self-concept views the world differently from one with a negative self-concept. There is also an ideal self (what a person would like to be) and sometimes incongruences may develop between the self and reality or self and ideal self, resulting in personality problems.

Abraham Maslow's Theory of Personality

Abraham Maslow like Carl Rogers, believes that self-actualization the basic force motivating the human organism. He emphasized the importance of happiness, love and joy in human life. He classified human needs into many hierarchical levels. Only on getting his "Basic Needs' fulfilled, an individual can try for the satisfaction of higher 'Meta Needs'. When an individual develops fully all his inherent potentials, he reaches the highest level of personality development and becomes a self-actualized person. A self- actualized person is characterized by qualities like spontaneity, autonomy and creativeness. All people naturally seek growth, self-actualization and pleasant, productive relations with others.

Evaluation of personality Theories:

It is obvious that no theory of personality is completely satisfactory in the sense of being fully comprehensive Psychodynamic and humanistic theories are not amenable to scientific validation, whereas social learning theories do not explain important aspects of an individual's personality.

Integrated Personality

Self- actualized personality, emotionally and socially mature, well-adjusted personality, integrated personality are almost synonymous. Such a person has realistic assessment of himself, his strength and weakness, has a stable self- concept involving a higher level of self-esteem and fewer

feelings of inadequacy and fewer evidences of compensatory behaviour and accepts himself, leading to himself being accepted by others.

Integrated personality implies harmony between five important aspects of personality, namely harmony between ones abilities and capabilities, harmony among one's interests, harmony between one's abilities and interests, harmony between one's self- concept and social constraints, and lastly, between one's self-concept and social codes of conduct. According to Skinner characteristics of an integrated personality are

-harmonious development of thoughts, feelings and tensions to activity, affection, sympathy and a desire to cooperate with others

-confidence in one's abilities as well as awareness of one's weakness: **Allport** points out that an individual with integrated personality will have two important characteristics.

i) Self -extension - Have clear life values and believe them personally and be involved in such values.

ii) Self-objectification: Able to evaluate oneself without any bias. These two characteristics will jointly generate a good philosophy of life. They believe and practice the dictum 'Be yourself and accept yourself.

Assessment of Personality

From time immemorial attempts have been made to predict the personality pattern of individuals through astrology palmistry physiognomy and phenology (predicting personality traits from bumps on the skull), graphology (handwriting analysis, etc. These are pseudo-scientific techniques.

To start with, the type approach of classifying people based on a central theme or characteristic styles of individuals. Kretchmer, Sheldon, Spranger, Allport and Vernon tried this 'type' of approach Following Cattell's personality tests and inventories were developed to identify and scale the position of the different personality traits Scientific and objective techniques of personality development involve collection of behaviour samples of various kinds

Generally, before trying to measure personality, it is necessary to draw up a list of personality traits which are to form the basis of assessment. Personality scores should be cautiously interpreted and must be always supplemented by data from other sources. Only trained and experienced persons should undertake personality tests.

Approaches and Methods of Assessing

Various methods employed in the assessment of Personality could be grouped under three major heads as shown below

I Subjective Methods

    (i) Autobi

    ography

    (ii) Self-

    rating

    (iii) Eliciting verbal responses of the subject – Questionnaires

                               -Attitude Scales

                                -Inventories

                                -Interview

                                -Aptitude Tests

                                -Interest inventories

II Objective Methods

(Observe and rate the physiological measures and behavioural

components) (i) Observation

  (ii) Chec

    k list

(iii) Ratin

  g Scale

(iv) Performance and Situational Tests

I Projective Techniques

Perceptive technique (Rorschach Ink-blot Test)	Apperceptive technique (T.A.T)	Productive technique

Interview method

Interviews involve direct interaction between the tester and the subject and the interviewer arrives at certain conclusions regarding an individual's standing in certain personality not only from the nature of his answers to questions asked but also from the way in which the subject conducts himself during the interview and answer questions Interviews may be introductory, fact finding (or informative), diagnostic of prognostic in nature. Interviews may also be structured following a standard pattern or unstructured t which the viewed determines largely what is discussed although a skilled interviewer may elicit a lot of pertinent information through his limited questioning)

An interview has a beginning (to establish rapport), a middle (to elicit information regarding personality traits) and an end (to terminate the interview on a cordial note by thanking the interviewee). The answers of the interviewee may be noted down or tape recorded for later analysis

Limitations of Interview Method

1. Interviewing is an art and this skill is not present in all to the same degree.

2. The problem of subjectivity involved in this method is the biggest limitation

3. The interviewer may dominate or humiliate the interviews

4. The interviewer may try to thrust his ideas on the interviewee.

Uses of Interview

i) Interview is the best option to collect information from children, senior citizens, patients, illiterate persona and very important persons in the society who are very busy in their work schedules.

ii) Interview is used more for routine activities like student admission, filling vacant posts. Student counselling) occupational guidance, medical counselling and judicial enquiry, then for collecting information for research.

iii) Interview is also used in research, particularly in historical studies, clinical case studies and survey.

iv) An ably conducted interview is far superior to other form getting reliable information, because

a) No one wants to write as much as talking, especially about themselves People are less cautious when talking, compared to writing.

b) As it is possible to clarify the objectives of certain questions or their meaning, appropriate responses could be obtained from the informants.

c) By putting cross questions, the integrity of the respondents could be confirmed.

d) The informants cannot modify or correct the responses they have already given to suit the questions fielded later.

Rating Scales

Ratings are simply the assignment of a numerical score that indicates the rater's judgement of the observed individual standing on a given particular personality trait. Generally, rating is done on a 5-point scale (very high 2, high 1, average (low-1 and very low-2) to indicate the degree or intensity of the trait present. Rating may be self- rating in which the subject rates himself and experimenter rating in which someone observes and rates the subject in a number of personality traits. Self-rating is susceptible to distortions due to self-interest and rating by others is more objective and valid. Factors the person bias, generosity error (rating all near the average), inaccuracies due to the ambiguity of the rating scale and "Halo effect" (our knowledge of an individual's rating in some personality at influences our rating the same individual in another unrelated trait) affect the reliability and validity of rating.

Questionnaire

According to Good & Hatt, "Questionnaire refers to a device for securing answers to questions by using an inquiry form which the respondent fills in him. In it, various important questions regarding the topic under investigation or personality traits will find a place."

The testee has to note down the answers for the series of questions found in a printed sheet. From the nature of the answers given by respondent to the questionnaire, his personality could be judged very well. Like questionnaires, personality inventories (usually statement form) are also used

Personality questionnaires and inventories were extensively used during the World War II to identity soldiers with emotional disorders. A few sample questions from Woodworth's popular questionnaire are indicative of the nature of personality questionnaires

Personality Inventories

This is similar to a questionnaire but the items given in are in the form of statements. The respondent should mark one of the three positions given against each statement that describes him most appropriately. By analyzing the responses given by the se, the nature of his personality is known.

Example

S. No	Statements	Always	Sometimes	Never
1	When speaking to strangers, I feel a bit of nervousness in me			
2	While trying to take up a difficult task, I perspire profusely			

Bell's Adjustment Inventory

This inventory is available in two forms-one for school students and the other for adults. In the Adjustment Inventory for school students, there are 140 items. They are related to the adjustment one has in four domains family, health, community and emotions. There are 35 items for each domain.

Projective Techniques

Projective techniques strive to get at the fundamental organization of personality. Relatively ambiguous and unstructured stimuli (like vague pictures, inkblots, incomplete sentences, drawings etc.) presented to the subject and he is asked b structure them in any way he likes. In doing so the

subject quite unknowingly projects his own desires, hopes, tears repressed wishes etc. and thus not only reveals his inner or private world but also gives indications on the basis of which his total personality may be assessed.

Three Types of Projective Techniques

The three important types of projective techniques are

i) Perceptive (Like Rorschach Ink blot test where the subject is to report what he perceives of the stimulus presented)

ii) Apperceptive (Here the subject goes beyond what he perceives and offers instead an elaborate story

iii) Productive (these rely on the performance of the subject like what he draws, what abject he makes plastic clay, how he plays a role etc.)

 (v) Here the interpretation is made not on the basis of one's response alone but rather in relation to the total configuration of responses.

Rorschach Ink Blot Test

This technique was developed by Harmann Rorschach the Swiss psychiatrist in 1921.The test materials consist of 10 cards, and each card showing an ink blot figure which convey no specific meaning and is of symmetrical nature on both Out of these 10 cards, five are coloured and the other e are black and white with different shades of grey.

A) Conducting the Test

The subject is shown the cards in a sequential order, one at a time. He is asked to say "what he sees in the picture or what the picture reminds him of". The subject is also to indicate the portions of the ink blot that suggested his response. Usually, no time limit for the test but some psychologists on the reaction time for each card and makes use of that the interpretation.

B) Scoring and Analysis of Responses

Objective scoring of the responses is done based upon three aspects (1) Location (2) Determinants (3) Contents.

Location: It refers to the particular part of a blot to which a single response refers some of the common symbols used in this connection are

W-Whole blot area

D-Large common detail

D-Small common detail

S-White space

Other details regarding the size, actual location such inside, edge etc. are also marked with different symbols.

Determinants: By a determinant is meant the particular aspect of the blot which directs the perceptual activity. The common determinants are:

M-Movement F-Form

C-Colour

K-Texture or surface appearances

Content: It refers to the actual meaning of the word. The common symbols are

H-Human figures

A- Animal figures

Hd-Human details

Obj-Manmade objects

Pl- Plants

At- Anatomical details

Intellectual activity is mostly indicated by F, W, D. The externalized emotions are indicated mostly by C combinations like C, F and K responses. The internalized emotional life is indicated mostly by M. As the administration and interpretation is a very complex process, Rorschach Ink Blot Test could be used only by a clinical psychologist. The test is highly useful in psychiatry.

Murray Morgan's Thematic Apperception Test (T.A.T)

This test consists of 20 pictures, each picture depicting a vague social situation. The subject is required to describe the situation as he perceives it. He is asked to describe as to what is happening at the present moment, as

to what has led to the present position, and as to what it is likely to lead to later on. In short, he is asked to spin a story with the picture. While constructing the stories, usually the individual identifies himself with one of the characters in the picture thereby projecting on to them, his own feelings, urges desires and anxieties The TAT responses are interpreted by analysing the recurring themes in the stories, the needs and frustrations of the hero and the description of the Interpersonal relation of persons in the picture. The responses of the subject help in understanding him. This was developed by Murray and Morgan. For children separate test (CAT) has been developed.

Situational Tests

We can call the situational tests as a kind of performance tests. The subjects are observed in situations and they do not know that they are being assessed. The tests are camouflaged. An honesty test can be conducted on young children. For example, in a vocabulary test, a list of words may be given to the subject, who is asked to check only the words known to him. In the list some fictitious words are also included. If a subject checks fictitious word also is exposing his dishonesty by his over statement. A check list of books I have read can be similarly loaded with fictitious titles.

Situational tests were extensively used during the Second World War in a programme for the selection of men secret duties in army. Hawthorne

and many others have used a number of such situational tests and performance tests of honesty. Such tests have poor validity Situational is often involve interpersonal situations. Situational tests may use two techniques; one is psychodrama and another is sociodrama.

i. Psychodrama

In psychodrama the individual has to play a role spontaneously in a situation. His behaviour is observed by trained observes. This technique is used to assess the personality of maladjusted persons. The director or therapist pays an important role in organizing situations in which the subject may express his bottled-up emotions. The central principle of psychodrama is spontaneity of the individual.

ii. Sociodrama

The purpose and emphasis are different in sociodrama psychodrama the subject taking the role is involved but sociodrama portrays problems with which the audience is concerned. It deals with the problems of the group structure and thinking. Many modern pictures written and directed by creative thinkers are the examples sociodrama. They reflect on the screen the corruption nepotism, favoritism and red tapism of the administrative set up.

Free Association Tests

Jung developed a free association test and was the elaborated by Kent and Rosanoff. Free association tests the uttering of a stimulus word by the tester and the subject responds immediately by another word. The time taken for response if long may indicate blocks, needing some more probing. The type of responses when analysed will give a clue to personally characteristics.

Dream and its Analysis

Dream

We all dream. It is a natural and universal experience people of all cultures enter into the dream state when they sleep. Dreaming is one of the most fascinating experiences of the mind. When we dim the light of consciousness, we enter the realm of the dream le. when our ago slackens its guard and takes rest in the sub-conscious state, our unfulfilled desires needs and longings, mental conflicts etc. gush out from their deeply buried state into the unconscious mind (ld) and imagination runs free with little or no interference from our conscious mind (Ego). Many a time, they come out in disguise in the form of different themes and symbols. When we return back to the conscious state (ie. when the ego returns to the conscious state from the sub-conscious level), we may not able to recollect our dreams fully. We may bring with us a hazy recollection of the wanderings of our imagination.

In the ancient past, people believed the dream to be the voice of God, warning us about impending dangers and helping the Gods Mohammed, the escape from them. In Egypt and Greece, dream was considered as a message from the Gods. Mohammed, the founding prophet of Islam, is said to have received much of has written in Koran through his dreams that scoured due to divine bliss.

In the early part of 20th century, however, the value of the dream was rediscovered by two great psychologists Sigmund Freud and Carl Jung. For Freud, the dream revealed what the dreamer would rather keep hidden. By exploring the dream, we can understand what one was aced to face, what was suppressed and rejected within oneself.

Carl Jung felt that the dream acted as a mirror for the revealing that which was missing from the consciousness of the dreamer. For Jung, the dream acted as a teacher and guide on the road towards wholeness. With the work of both Jung and Freud, dream regained its status a source of wisdom and healing.

Analysis of Dreams

Analyzing the dream and interpreting it is just like penetrating a well-guarded fort, to have a glimpse of what it houses. This process of extracting the meaning from a dream moves the following 5 steps.

i) Ask the dreamer to describe his dream and write it out.

ii) Ask the dreamer to list all the components of the dream, be the people, places, events or circumstances.

iii) The next important step is to make the dreamer write down all his associations to each of the dream elements.

iv) In the fourth step, the investigator tries to amplify the dream. This is done by taking various themes and symbols from the dream and finding similar material in mythology, psychology or other areas related to the study of symbolism.

v) In the last step, the dreamer is asked to think and describe about yesterday's events vividly, the investigator has gone over the material, tossing and turning the dream in the head. If he stops and wait patiently at this juncture, inspiration is sure to hit slowly cracks will appear and little insights into the dream will abound. Before long the walls of the fort will fall and the essence of the dream gets flashed.