

UNIT 1 EDUCATIONAL PSYCHOLOGY AND HUMAN GROWTH AND DEVELOPMENT xxx

Psychology.

Psychology is the scientific study of mind and its functions. It is the science of mind and behaviour. It is the study of how it works and how it affects the behaviours. There are several branches in Psychology. There are intellectual, educational, forensic, clinical etc.

Educational Psychology. ✓ IMP

- * Educational Psychology is a branch of Psychology that focus on educational aspects.
- * It focus on school educational issues
- * It consider how students learn, perceive, retrieve or demands knowledge in mind.
- * It focuses on student's thinking, memory, intellectual aspects / capacity, emotional aspects
- * It focuses on students behaviour.

Importance of Educational Psychology (IMP)

Teacher should be aware of student growth and development so for that educational psychology is needed. The Teacher is a person direct the student.

1. It help the teacher has to learn take place in the different place and different learning.
* Teacher's role is to help student learn
* It help the teacher to ~~know~~ know what learning is.
2. It help the teacher know the nature of the learning process.
3. It helps the teacher give proper guidance to the students.
4. It helps the teacher facilitate proper development of all students abilities.
5. It helps the teacher understand the nature of students.
6. It helps the teacher evolve or identifying proper method of teaching.
7. It develop the teacher problem solving skills
8. It helps the teacher respect the learners.
9. It helps the teacher make proper assesment of student learning.
10. It helps the teacher develop personality of the students.
11. It helps the teacher to help the students form proper attitudes.
12. It helps the teacher diagnose learning difficulties of the learners.

Growth and Development

Growth refers to increase the physical and structural science. It involves the all-physiological changes. eg: growth, weight, height increase etc. It is quantitative.

Development refers to the overall changes in the organism. Development is the continuous process. It involves physical, mental, emotional, moral changes. Development is quantitative and qualitative.

Growth

- * It implies physiological changes
- * It is a part of developmental process
- * It is quantitative
- * It stops after maturation
- * Growth may or may not be development

Development

- * It implies overall changes in the individual
- * Development includes growth.
- * It is quantitative and qualitative.
- * It continues throughout life
- * Development is possible without growth.

Principles of Development

1. Development is a continuous process.
2. It continues throughout the life of an individual

3. it involves change
4. As part of development different type of change occur example - change of size, height, disappearance of old features and appearance of new features.

5. There is individual difference in the process of development

6. Each child develop as per his abilities and his environment

7. Development follow a uniform pattern
eg: children's hand developed before the fingers.

8. Development proceeds from the centre to periphery
head. THE PRINCIPLES OF PROXIMODISTAL development describes the direction of development
It implies for nearer to far apart.

9. Development proceeds from the head to downwards
this is called CEPHALOCAUDAL PRINCIPLE.

This principle of development occur head to tail.

The child gains control of the head first, then the arms and then the legs.

10. Development depends on maturation and learning

11. Development is predictable:

Development take place in a predetermined order. it is predictable

Nature and Nurture.

It indicates a debate that relates the contribution of genetic inheritance and environmental factors to human development whether it owes to genetic inheritance or to environmental aspects. It is the focal point of the debate - b/w nature and nurture.

Nature : means genetic factors are more imp- in the development of human being.

Nurture : Environmental factors contribute more to development of human being.

Maturation.

It implies the completion of growth. It is the biological process involved in a organism becoming functional or fully developed.

Dimensions of Development.

It includes

1. Physical Development
2. Cognitive [mental] development
3. Emotional Development
4. Social Development
5. Moral Development

occurring in an individual. Dimensions of Development can be seen at every stages of development such as.

- | | | |
|------------|---|-----------------|
| 0-2 age | - | Infancy. |
| 2-6 age | - | early childhood |
| 6-12 " | - | later childhood |
| 12-19 " | - | adolescence. |
| 19-60 " | - | adulthood |
| 60 onwards | - | old age. |

Development of Adolescence

Physical Development of adolescence in case of Boys.

- Boys →
- * voice changing
 - * sexual organs development
 - * genital organs of boys get fully developed
 - * facial hair begin to appear about 17- to 18 years becomes that of adults life.
 - * Pubic hair appearance.

In case of Girls

- Girls →
- * Menstruation begins
 - * genital organs develop
 - * Breast develop
 - * Pubic hair appear and reaches adults pattern at about 13 to 14 years.

Mental Development

- * cognitive development

It means the development of the ability to think pensive and reason. It is the ability to use intellectual capacity.

- * begins to question authority
- * questions Society standards
- * begins to express their own thoughts on variety of topics
- * develop intolerance towards opposing views
- * Insistence on their own stand and views as correct

Emotional Development

- * During adolescence emotions become stronger.
- * Their mood may change frequently
- * It is common for adolescence feeling angry, confused, sad, and don't know why?
- * They may be more sensitive
- * They are attention seekers
problem may occur if they are not given attention and care.

Social Development

- * During the adolescence time try to establish a sense of ability and identity.
- * Body image is very imp for them
It's very imp for sense of self identity especially for girls
- * Risk taking behaviours is more active
- * They are highly interested getting social approval

Moral Development

- * It implies a process where by people form a sense of what is right and wrong.
- * Adolescence develop their own Code of ethic

Developmental Task [Havighurst]

It is the task that arises at about a certain period of an individual. successful completion of those task leads to happiness and success with later task and failure leads to unhappiness.

- Early childhood is characterised by basic task - such as learning to walk taking solid food - and controlled elimination of body waste.
- In adolescence development task are related to developing personal independence
- Adolescence learn to achieve new forms of intimate relationship, prepare for an occupation and learn to achieve emotional independence of parents.

These are the imp task or developmental task put forward by Havighurst.

UNIT 2

ATTENTION PERCEPTION AND MEMORY

Attention.

Concentration of the awareness on some aspects, It is the ability to process information. It involves listening, it facilitate learning. It is imp in learning.

Span of attention

It refers to the duration of a person attention to given task or stimulus. Attention span differs to person to person.

Inattention.

It implies lack of attention. It is the state in which is the lack of concentrated attention.

Distraction

It implies diverting of the attention of an individual or group from the chosen object of attention. It directs ones attention from the chosen - area / object of attention.

Divided attention.

It is the ability to pay attention on '2' activity on time at a time. eg: talking to a friend while driving a car.

Determinants of attention

Attention can be influenced by several factors

as. These factors can be decided as internal factors and external factors.

a) External factors.

i) nature of the stimulus.

Nature of the thing that attracts attention is an important factor. Some stimulus may be more attractive and some other may be not be so attractive. So the nature of the stimulus is an important factor that determines attention.

ii) intensity and size of the stimulus

It influences our attention (sound, light, touch, picture, size, etc.) Strong stimulus can influence more attention.

iii) variety

variety influences attention so easily.

iv) Repetition of stimulus

It is the factor is great important in securing attention. Some stimulus may be ignored in the beginning but if it is repeated for several times it captures our attention.

v) Movement of the stimulus

The moving stimulus catches our attention more quickly than a stimulus that does not move.

b) Internal factors.

Factors that come from within the individual. They are internal to individual.

i) interest

we attend more object in which we have interested. Interest set to be said to be mother of attention.

ii) Our basic need and motives

Our basic needs and motives influence our attention. Hunger, thirst, sex, fear etc are some of the imp motives that influence our attention

iii) Mindset

It implies our readiness to response it influence our attention.

iv) Mood and Attitude.

Attitude may positive or negative it influence our attention. Mood influence our attention (mood, sad, angry, anxiety) relaxed more is better for securing attention than anxiety mood

Sensation and Perception.

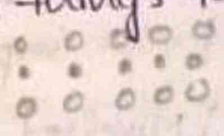
Sensation implies the process through which our sense organs receive information implies through environment. It is the primary experience caused to by a stimulus identified by a specific organ such as eyes, nose, ears, skin and tongue.

Perception refer to the process with which we interpret the sensation. It is the process through which our brain selects and interprets sensory information.

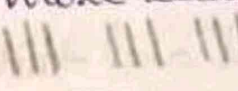
Laws of Perception

Gestalt theory has put forward some laws regarding perception. It helps to understand how perception work.

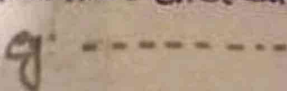
* Law of Similarity

It implies similar things ^{are} tend to appear grouped together. eg: 

* Law of Proximity

This law implies that things that are close close appearance as more related than things that are far. eg: 

* Law of Continuity

It implies that elements in a line or a curve seems more related to one another. eg: 

* Law of Closure

It implies that we perceive elements as belonging to the same group. If they appear to complete some forms. eg: 

Errors in Perception : Illusion and Hallucination.

1. Illusion

It is a perception experience from a real-stimulus which leads to an incorrect perception. In other words it's a kind of perception that occurs when the sensory stimulus is present but is incorrectly perceived and misinterpreted.

2. Hallucination

It means the experience of perceiving object or events that don't have an external source, such as hearing one's name called by a voice but no one else to seem to hear. Hallucinations are sensory experiences that appear real but are creation of one's mind.

Memory

Memory is the ability to retain information in one's mind. It's the ability to store and retrieve information to use when needed or on demand. Memory involves:

1. encoding
2. storing
3. retrieving

1. **Encoding**: To transform what we see, what we hear, what we smell etc. into a form that our mind can accept.

2. **Storing**: Mind will store this message in a code form.

3. **Retrieving**: we will retrieve information on demand so the mind will change the code form into the information.

Features of good memory.

- * quick perception
- * good retention
- * stable in mind
- * Rapid recall
- * quick recognition

Types of Memory

1. Sensory memory.

It is the memory that allows a person to remember sensory information after the stimulation has ended. Remembering the sensation of a person's touch or a sound we heard in while passing sensory memory.

2. Short-term memory

It is the memory that allows a person to remember specific information for a short period of about 30s. It also known as primary memory. Items can be move from short term memory to long term memory through process like rehearsal.

eg: when a person reads a line in a book for a set of numbers that he has to recall, it is a part of a short term memory.

3. Long-term memory.

It is the memory that allows a person to recall specific information after about 30s. There is no limit how much our long term memory can hold information and for how long. Long term memory has vast storing capacity. Some memories can last till the end of life. The

capacity of memory differs from person to person
long term memory is two type

- * Explicit memory

- * Implicit memory

Explicit memory : It include information that is deliberately stored and retrieved

Implicit memory : It is not based on deliberate storing and retrieving of information

4. Episodic memory.

Episodic memories are consciously recalled memory related to experienced personal events. These involves memories of particular moments from personal history. It contains information for what has happened and also where and when it happened.

B. Semantic memory

It refers to our general knowledge that includes memory of concepts, facts, meaning of words etc.

eg: Recalling that India got independence at 1947. New Delhi is the capital of India. English has 26 letters.

G. Procedural Memory.

It's a part of long term memory. It refers-

to our knowledge of skill and how to perform a task. It stores some kind of information or how to perform or do procedure such as talking, riding a bike, riding a car etc... If you have certain practice with regard to certain skill, you will be able to do it without much deliberate thinking.

Measures to Improve Memory.

1. Rehearsal
2. Practice regular
3. Be mentally active
4. Ensure sufficient sleep
5. Ensure proper organisation of the material.

Motivation

Motivation is an urge to behave in a way that help us to achieve a goal. It is the process that guides goal-oriented behaviour. Motivation is of two types.

1. Extrinsic motivation.
2. Intrinsic motivation.

Extrinsic motivation:

It is the motivation that comes from outside or others. eg: some additional benefits will offer when you perform well.

Intrinsic motivation:

It is the motivation that comes from within. It is caused by a sense of personal satisfaction eg: we practice a work when we are enjoying it. If you are studying painting, you enjoy learning it and you want to make yourself a great painter, then you are intrinsically motivated.

Abraham Maslow's Theory of motivation.

[Hierarchy of Needs.]

This theory is based on the hierarchy of human needs. Maslow arranged human needs hierarchically. The needs are:

1st - Physiological Needs : It is the first need. It includes food, shelter, clothing, sleep, sex etc.

2nd - Safety needs : safety need is the second need. Everyone one need safety. It includes freedom, peace, encouragement etc. If safety is not given well, student can't study well.

3rd - Love and belongingness need : This level of need involves a feeling of belongingness. It implies a person's need for interpersonal relationship. It is the need for affiliation, the need to be a part of a group etc. It includes friendship, acceptance, giving and receiving of love, intimacy etc.

4th - Esteem Needs : Everyone has dignity. Each person desires to get respect from others.
eg: Develop the confidence by giving respect.

5th - Cognitive Need : It is the need for knowledge and understanding.

6th - Aesthetic Need : It implies the need for - appreciation and search for beauty.

7th - Self-actualisation Need : This is the ~~very~~ highest level of need of Maslow's hierarchy. It implies the realisation of personal growth. It involves the desire of a person to become - what he is capable of becoming.

Educational Implications of this Theory.

- Students physical, intellectual, emotional and social aspects are to be considered.
- Student's physiological needs are to be achieved first.
- Students should be respected.
- Teachers should be supportive.
- Develop the self esteem of students.
- Ensure a safe atmosphere.

Level of Aspiration

It implies where and how far individuals set targets for their achievement. It involves the level of target for achieving the goals. These targets are fixed based on past experience. We are - consider our circumstances, past success or failure, interest etc. to set these targets of achievement. These are called level of aspiration.

My
notes
Jamil
note

E.L. Thorndike's Theory of Trial and Error Learning.

Edward L. Thorndike.

Connectionism

The learning theory of Thorndike, represents the original stimulus and response framework of behavioural Psychology. Learning is the result of.

forming b/w stimulus and response such associations or 'habits' become strengthened or weakened by the nature and frequency of the Stimulus Response pairings. The paradigm of the for the stimulus response theory was trial and error learning. In which certain responses come to dominate others due to rewards. The hallmark of connectionism (like all behavioural theory) was that learning could be adequately explained without referring to any unobservable internal states.

Thorndike theory consist of three primary laws : Laws of readiness, laws of effect and laws of exercise.

Law of readiness: is a series of responses can be chained together to satisfy some goal which was result in annoyance is blocked.

Law of effect :- response to a situation which followed by a rewarding state of affairs will be strengthened and become habitual response to the situation.

Law of exercise :- connections become strengthened with practice and weakened when practice is discontinued. A corollary of the law of effect was the response that reduced the likelihood of achieving a rewarding state (i.e., punishment, failures) will decrease in strength.

Educational implication

- uphold imp of readiness in learning
- it emphasizes practice
- Reinforcement should given strengthen learning
- Our learners must be motivated.
- it develops positive attitude among students.
- Reward and punishment can be used better for effective learning.

Pavlov's Classical Conditioning Theory.

Teacher.

E.L Thorndike's Theory of Trial and Error Learning

[Bond Theory or connectionism theory]

- This theory is known as Trial and Error Learning.
- This theory was proposed by E.N Thorndike.
- Thorndike says that learning takes place due to the formation of a connection between stimulus and response.
- This theory is also called Stimulus-response bond theory of learning.

Stimulus means any object or event where any situations that evoke a response from an organism.

- Learning takes place as a way of trial and error, we make several attempts, it may fail but consequently we may reach success.
- Thorndike conducted an experiment. This theory was formulated on specific experiment.

ei,

Thorndike put a hungry cat in a puzzle box. The box had one door which could be opened by manipulating a latch of the door. A fish was placed outside the box. The cat had made many trials to pull the latch to come

out of the box. The cat has strong motivation to come out of the box and get the fish. The cat made several attempts inside the box indicating trail and error.

eg: jumping, pulling, dashing...

At one attempt the latch was manipulated accidentally, the cat came out and got the fish. The experiment was repeated. A series of successive trials, the cat took shorter and shorter time. That means cat committed lesser number of errors and become a position to manipulated to latch. i.e. the latch was opened as soon as the cat was kept inside the box.

→ The learner makes several attempts in learning. Some attempts may fail, but the learner can reach at his own to make the correct response.

→ Thorndike says that, it was only after many times or some random trials and errors learning takes place.

→ On the basis of this theory Thorndike proposed these laws of learning.

1. Law of Readiness
2. Law of Exercise
3. Law of Effect.

1. Law of Readiness

It is the uphold the importance of readiness on the part of learner.

→ learner to learner

→ Thorndike says that readiness means preparation for action. He says that we must teach the learner only when he/she is ready to learn.

→ If a student is not ready to learn, need not to try to teach.

→ So readiness is important on the part of learner.

→ when a condition unit ready to conduct condition is satisfied.

eg: A student is ready to play, then playing is satisfied. Satisfied.

→ when a condition unit is not ready to conduct, then condition is annoyed.

eg: Student is not ready to play, then playing is annoyed.

→ when a condition unit is ready to conduct ^{but} not conducting is annoyed.

eg: we are ready for outing, but family is not allowed then we will annoyed.

2. Law of Exercise

This law emphasise the importance of practice learning it has 2 parts.

- a) law of use
- b) law of disuse.

a) law of use - takes when a modifiable connection is made between a situation and responds, that connection is increased.

b) law of disuse - takes when a modifiable connection is not made between a situation and responds that connection is decreased.

→ Practice helps in increasing efficiency. it implies - that any act that is not practised for sometimes, gradually decreased.

→ If we make sufficient practice the learning will be strengthened otherwise not strong. i.e. gradually decrease.

3. Law of Effect.

Any behaviour that is followed by pleasant consequences is likely to be repeated.

eg: Teacher ask question and student say answer so that teacher give some gifts. Then this behaviour repeated, otherwise not.

→ Any behaviour that is followed by pleasant consequences is likely to be stopped.

→ Thorndike says that rewards strengthened the responds.

Education Implication.

- Readiness to learn and practice is important
- Learners must be motivated
- Reinforcement is to be given to strengthen learning.

Piaget's Theory of Cognitive Development

Piaget's theory of cognitive development suggests that children move through four different stages of learning. His theory focuses not only on understanding how children acquire knowledge, but also on understanding the nature of intelligence.

Stages are.

① Sensorimotor Stage [Birth to 2 years]

During this earliest stage of cognitive development, infants and toddlers acquire knowledge through sensory experiences and manipulating objects. A child's entire experience at the earliest period of this stage occurs through basic reflexes, senses, and motor responses.

Object permanence :-

Object permanence is the understanding

that objects continue to exist even when they cannot be sensed.

Different Imitations :-

The ability to reproduce a previously witnessed action or sequence of actions in the absence of current perceptual support for the action.

② Pre operational Stage [2 to 7 years]

- Begin to think symbolically and learn to use words and pictures to represent objects.
- Tend to be egocentric and struggle to see things from the perspective of others.
- Getting better with language and thinking but still tend to think in very concrete terms.

Symbolic thoughts :-

Symbolic thought refers to the use of symbols eg: words and images and mental representations of objects or events to represent the world.

Egocentric thought :-

It refers to the child's inability to see a situation from another person's point of view.

Conservation :-

The awareness that physical quantities don't change in amount when they are altered in appearance.

animism :-

This is the belief that inanimate objects [such as toys and teddy bears] have human feelings and intentions.

- ③ Concrete Operational Stage [4 to 11 years]
- Begin to think logically and concrete events.
 - Begins to understand the concept of conservation that the amount of liquid in a short, wide cup is equal to that in a tall, skinny glass, for examples.
 - Thinking becomes more logical and organized but still very concrete.

- ④ Formal Operational Stage [Age 12 and up]
- Begins to think abstractly and reason always hypothetical problems.
 - Begins to think more about moral, philosophical, ethical, and political issues that require theoretical and abstract reasoning.
 - Begins to use deductive logic, or reasoning from a general principle to specific information.

Schemas.

A Schema describes both the mental and physical actions involved in understanding and knowing. Schemas are categories of -

knowledge that help us to interpret and understand the world.

Learning:

Learning is a selectively lasting change in behaviour that is the result of experience. It is the acquisition of information, knowledge and skills. The acquisition of knowledge or skills through study, experience or being taught.

Pavlov's Classical Conditioning Theory

Ivan Pavlov

Natural Stimulus [unconditioned stimulus] ^[CS]

Natural Response [unconditioned response] ^[UCR]

Artificial Stimulus [Neutral response] ^[NR]

CS - conditioned stimulus

CR - conditioned response

[Classical conditioning is a learning technique associated with the selection of stimulus and its response.]

Conditioning: is a process whereby the response to be a natural stimulus is substituted to a substituted stimulus / neutral artificial stimulus]

He conducted some experiments to prove this theory, use with a DOG

He arrange room with hungry dog and he gave food for correct time. And later drumbeats, before give food he make

bell sound. The food was presented the dog produced saliva. After the use of bell the dog understood he get food after the bell and he produced saliva after the bell, before he get food.

when the bell was rung and a food.

Here the food → natural stimulus } Saliva
 Bell → natural stimulus } Produced
 ↓
 natural stimulus

Stages of conditioning.

Pre conditioning stage :- natural stimulus and natural response.
 Food and Salivation.

while conditioning stage :- an artificial stimulus is joined the natural stimulus.
 Bell + food → Saliva
 ↑
 natural response

Post conditioning stage :- Conditioned stimulus.
 ↓
 conditioned response

Classical conditioning is a process leading process in which natural stimulus and natural stimulus are paired to produce -

a new learned response. This theory was profounded by Ivan Pavlov

classical conditioning involves placing a neutral stimulus before natural stimulus. In Pavlov's experiment with dogs, the neutral stimulus was a sound of a bell and natural stimulus was food. The natural response was salivation in response to food. By associating the neutral stimulus [sound of Bell] with natural stimulus [food] the sound of the bell alone could produce the salivation response. Thus the sound of the bell becomes the conditioned stimulus and the salivation in this context is the conditioned response.

Principles of Condition.

Extinction:-

- conditioned response become weak after a particular time.
- Gradually weakening of conditioned response by breaking the association b/w natural stimulus [UCS] and conditioned stimulus [CS]
- If the conditioned stimulus [CS] presented several times without associated natural stimulus, conditioned ^{Response} stimulus [CR] [CR] will not occur.

Spontaneous Recovery :-

It refers to the return of a conditional response [CR] after a period of time following extinction.

Educational Implication.

- * Associative learning
- * Reward
- * Importance of practice
- * Corrosion of bad habit
- * Response modification.

Skinner's Theory of Operant Conditioning

- In this case response or behaviour occurs in natural.
- Operant conditioning implies a kind of learning process where by a response is made more probable or improbable to occur by its consequences.
- According to this theory, a response or a behaviour that is followed by pleasant consequences, tend likely to be repeated.
- Behaviour that is followed by unpleasant consequences tend not likely to be repeated.
- The role of reinforcement is very important

to learning, Behavioural response are reinforced to consequences.

→ The theory is also known as "Instrumental - conditioning." B.F Skinner is the father of operant conditioning.

→ Operant :- to refer to any active behaviour that generate consequences is termed as operant.

Experiment by Skinner.

→ Skinner box, record animals behaviour.

→ He put a hungry Cat in a box

→ Cat is moved here and there for food.

→ There is a pedal in a box

→ The cat unexpectedly touch the pedal, after more try.

→ After touching the pedal he got food.

→ After the many many try

→ Later more try he understood he got food after push the pedal, because he got the idea.

Reinforcement - action that increase the probability response.

Operant conditioning refers to the kind of learning process where by a response is strengthened or weakened by reinforcement.

Skinner identified three types of response.

1. Neutral Response [Operant or behaviour]
2. Reinforcement
3. Punisher

1. Neutral Operant :-

It implies that actions that neither increase nor decrease the probability of recurrence of a behaviour or response.

2. Reinforcement :-

Reinforces are actions or events that increase the possibility of response or behaviour to be repeated. It can be positive or negative.

In positive reinforcement, a response or behaviour is strengthened by the prize or rewards, leading to the repetition of behaviour.

Negative reinforcement is removal of an unpleasant experience and strengthened by removing an unpleasant experience.

3. Punisher :-

It implies an action that weakens or eliminates a response. It can also be positive and negative.

positive punisher :- It implies presenting an unfavourable action in order to -

weakens the action or response

eg: If an employee make a mistake, his manager may become angry.

Negative response punisher: means removing a favourable situation after a response

eg: Deleting a game from the phone however following the child's excess use of the mobile

However punishment is not a desirable action.

→ Punishment is not a best option because of its demerits.

* Punished behaviour, is suppressed children and the same of them, they are not forgotten

* It cause increase aggression, depression, so on...

Schedule of Reinforcement

1. continuous Reinforcement

It means giving reinforcement every time after a response occurs.

2. Fixed Reinforcement

It means giving reinforcement after fixed number of responses.

3. Fixed interval Reinforcement

It means giving reinforcement after fixed interval of time, provided the correct response is - occur atleast once.

4. Variable Reinforcement
It means giving reinforcement after variable number of time. Here the number of time, provided that atleast one correct response are made.

5. Variable ratio Reinforcement
It means giving reinforcement after variable number of responses. Here the number of response after which reinforcement is given differs depending on the situation.

Educational Implication.

Skinner has contributed a lot in the field of education.

1. Reinforcement
2. Behaviour modifications (by offering rewards we can make students behavioural better)
3. Programmed instructions.

Theory of Constructivism

John Dewey.

It is a theory of learning that sees learning construction of a knowledge. It can create individual knowledge and basic knowledge. The fundamental point of constructivism is that people construct their own knowledge through experience.

- Learning should be in the proper context
- Process is to be given more importance
- Learning takes place as construction of knowledge.

Jean Piaget's Cognitive Learning Theory.

- Piaget was a cognitive psychologist and founder of the cognitive school of psychology.
- It is a theory of learning that focuses on the mental process or mind.
- He uses some new terms while describing his theory, that are Schemas, Assimilation, Accommodation, Equilibrium.

1. Schemas :- It is the building block of knowledge. It is a category of knowledge that helps us to understand, it can be modified as a result of experience. It is also known as the unit of our mental structure. Schemas can be changed, modified, enlarged.

2. Assimilation :- It is a process of associating new information with the existing knowledge. It means incorporating new information.

* It is a process of taking new information into our previously-existing schema. It associates a new information to what is already learned or known.

3. Accommodation :- It is a process of changing our existing schema in the light of our new schema or information. It involves changing existing schema as a result of a new information. New schemas may be developed during accommodation.

4. Equilibrium :- It is the process by which the schemas changed from one stage to another for maintaining balance b/w the process and environment. It indicates failure of assimilation. Finally child changes his schemas to ~~see~~ accommodate new information.

Disequilibrium :-

It is an imbalance b/w what is understood and what is encountered (confusion state). It indicates failure of assimilation.

which is not supported existing schema, he experiences some confusion.

this confusion is disequilibrium

consequently the child changes his Schema to accommodate new information and move back in to equilibrium.

Here piaget theory described the developmental failure of human intelligence.

Intelligence are developed through a sequential order. He identified (4) stages of development of intelligence. They are.

1. Sensory motor stage [Birth - 2 year]

The infant interact the environment through physical actions.

2. Pre operational stage. [2-7 years]

- This is the period of developing communication
- Improved oral communication
- Animism — [treating inanimation objects are living being]
- Ego centrism
- Realism
- Centricism

3. Concrete Operational stage [7-11 years]

- child arranges objects in an order on basis of certain features.
- logical reasoning
- decrease in ego centrism.

4 Formal operational stage operational stage
[7 years and above]

- Abstract thinking
- Systematically solve problems.
- Logical thinking
- Make generalisation.

Humanist Psychology.

Carl Rogers.

Humanism :-

It is a psychological thought that emphasises the importance of human value and dignity or welfare. Humanists uphold that people are innately good. Carl Rogers is one of the prominent humanist psychologist. We use some terms describe by his theory.

1. Self Concept

A person's knowledge of who he is?

It includes a person's knowledge of his character, behaviours, beliefs etc.

According to Carl Rogers, self-concept includes three components that are ideal self, self-image, self-worth [self-esteem]

* Self image

- It implies persons images to their self
- it implies how we see ourselves, include our character, role, everything.

* Self worth

- It implies how much a person values himself
- we form self-esteem how other people - seen or considering us.

* Ideal Self.

- It means the self we like to be. It may not be perfectly match reality.
- ~~Sometimes it can mismatch~~
- So it mismatch to the self image or - reality that make some distractions to the self worth or self-esteem.

Educational Implication.

- Respect Student.
- All Students should be considered
- Encourage Students creativity,
- Personal growth.
- Self-esteem.

UNIT 4

INTELLIGENCE AND CREATIVITY

Intelligence

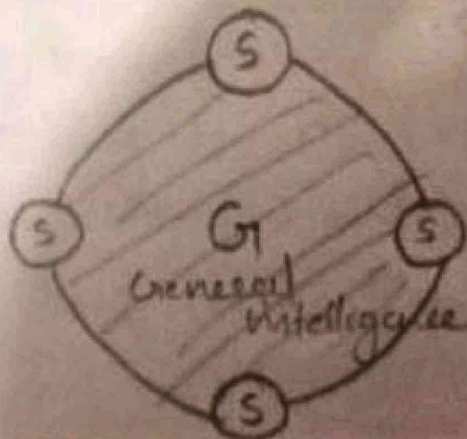
- It is the ability to adjust with the environment
- It is the capacity to acquire and apply knowledge and skills.

According to "David Wechsler" - intelligence is the aggregative and global capacity of the individual to act purposefully, rationally and to deal effectively with his environment.

Theories of Intelligence.

1 Two factor theory of intelligence — Karl Spearman

Intelligence have two components -
'G' factor [General Intelligence factor] and -
'S' factor [Specific intelligence factor].



G factor - is common for all
inborn ability, general consent
it differs from person to person.

S factor - It is acquired from environment
It is specific for abilities
Individual differ in the amount of S factor

Total intelligence of an individual is the sum-
of 'G factor' and 'S factor' eg: $[I = G + (S_1 + S_2 + \dots)]$
 $[I = G + S]$

2 Thurston's Group Factor Theory.

Human intellectual abilities are different
so there is a group of factors which cause the
mental operations.

Thurston's identifies intelligence has
having a primary abilities. Some factors are -
common to certain activities and not to all-
activities. Thurston followed '9' primary factors

1. A

1 - Numerical factor : It indicate a person's -
ability to solving mathematical pblm
~~and~~ numerical operations.

2. Verbal factor : It implies a person's ability -
to understand and use language.

3. Space factor : ability to manipulate ima-
ginary object or imaginary situations

eg. Solve puzzles, ability to visualization.

4. Memory

:- Ability to a person's recall and associate previously learned

5. Verbal fluency
or
word fluency

:- The factor underline or uphold communication skills of a person.

6. Inductive reasoning factor

:- ability to reasoning
* ability to understand general concept from specific concept

7. Perception factor

:- It implies the ability to understand recognize or comprehend specific image, letters, number etc...

8. Deductive reasoning factor

:- It implies the ability to understand specific concept from generalized concepts.

9. Problem Solving ability factor

:- It implies a person's ability to solve problems.

Main features.

→ These are the primary mental ability.

→ Each primary mental ability is independent of others.

- people have different degrees of primary mental ability.
- Thurstone views that a mental operation is caused not by one or two factor but by a group of factor.
- Some factors are common to certain activities and not to all activities. These factors altogether constitute group factor. Each of these group has a primary factor of it's own. These primary factor also called "Primary mental abilities" [PMA]

3 Thurstone's Multifactor Theory

Intelligence is not a single factor. It is a combination of many factor or multiple factor. He says that intelligence involved three independent abilities. so it is not ^{Possible} ~~easy~~ to combine these elements

1. Abstract intelligence
2. Concrete intelligence
3. Social intelligence

1. Abstract intelligence

It implies the ability to deal with abstract ideas, deal with imaginary situations, ability to symbolic thinking, ability to deal with hypothetical situations. [need high level intelligence]

2. Concrete Intelligence

It implies the ability to manipulate objects. It implies that ability to comprehend activities. It is ability to deal to understand situation and treat. It is evident from various activities of daily life.

3. Social Intelligence

It refers to the ability to interact with others, communication with others and social.

4. Guilford's Structure of Intelligence Theory

Guilford says that intellect consists of three dimensions. Therefore intellect includes three dimensions and these dimensions are known as Operation, Content, and Product. Guilford says that many intellectual activity is the result of the cognition of these three dimensions. Each of these dimensions are independent. If any intellectual activity is include these three dimensions.

Operation is include 6 types

Content is include 5

Product is include 6

So Guilford identified $6 \times 5 \times 6 = 180$ ^{operating} ~~products~~

or components of intelligence.

Operation . [Brain test]

It means intellectual process, it means act of thinking. Structure of intellect include 6 operations or 6 general intellectual process.

1. Cognition :- It refers to the ability to understand information or comprehend information.
2. Memory encoding :- It implies the ability to encoding information.
3. Memory retention :- It is the ability to retain and recall information.
4. Divergent production / thinking :- It is the ability to identified several solutions of a problem.
5. Convergent production / thinking :- It is the ability to identified single solution to a problem.
6. Evaluation :- Judging a value, it implies the ability to judgemental - whether a particular thing or whether the information - accurate or not.

Content

There are 5 types of content that human-

mind uses to perform the operations mentioned above.

1. Symbolic :- information that appears in the form of Signs and objects.
2. Semantic :- comprehension of information or perception of information or meaning of information.
3. Visual :- Visual information, information we get by sight (videos, images,)
4. Auditory :- Auditory information, information we get by hearing - (story telling, song, news etc.)
5. Behavioural :- It means perception of understanding others or other actions and their importance. Some get another ideas by observing others.

Product

There are 6 products.

1. Units :- It means a single piece of knowledge.
2. class :- A collection / group of similar features.
3. Relations :- It implies related knowledge or information.
4. System :- A network of information.

5. Transformation : changing knowledge

6. Implications : it implies the ability to foresee information.

He says that any intellectual activity is a result of the cognition of these three dimensions. Each intellectual ability stands for a particular operation in a particular content area as a result is a specific or particular product.
eg: evaluation of semantic implication.

5 Theory of Multiple Intelligence

Howard Gardner - American

He says that people do not have a single intellectual capacity but people have many types of intelligence.

He first explained it in his book titled 'Frames of Mind'.

1. Linguistic Verbal intelligence

The ability to use language effectively both in speech and writing.

2. Logical mathematical intelligence

It implies the ability to calculate and carry out mathematical operations. The have good mathematical reasoning, they can analyse problem easily.

3. Musical intelligence

It implies the ability to do music related activities and understand music and create and enjoy the music. Appreciate it.

4. Interpersonal intelligence

It implies the ability to understand and effectively interacting with others. A person having high interpersonal intelligence can make a relationship with others. Can make friendship and maintain. They know how to deal with others, how maintain contacts with others.

5. Intrapersonal intelligence

It implies the ability to engage with oneself or capacity to understand oneself. engage with own feelings and thought. They honest to behave with themselves.

6. Naturalistic intelligence.

It refers to the ability to be tune with nature. Persons having high naturalistic intelligence are eager to protect nature / environment. They try to learn about the nature.

7. Bodily - kinesthetic intelligence

The people with bodily kinesthetic intelligence are good at body movements or physical activities or control. They may have

opportunities of physical activity teacher, army, circus artist, fire force etc.

8. Visual Spatial Intelligence

people who are strong in visual spatial intelligence are good in visualizing things.

9. Existential Intelligence

It implies the capacity to deal with matters related to human existence such as meaning of life, life after death, why we die.

10. Moral Intelligence

It implies the ability to uphold moral morality. A person who has high moral intelligence is more interested in matters related to morality.

11. Spiritual Intelligence

It deals with the ability of spiritual activities.

Educational Implication.

What is the implication of multiple theory?

A teacher should understand that students possess different kinds of intelligence. So teachers should try to take to the means of every student in the classroom. The teacher gives personal and vocational guidance to the students.

According to the kind of intelligence is possible. It helps the teacher to provide vocational guidance in each learner according to the kind of intelligence is possible. It is meaningless to expect same level of proficiency in each learner in each subject. It is impossible to achieve because the kind of intelligence and the difference in the learning process are different.

Assessment of Intelligence.

Intelligence is assessed through intelligence test. Intelligence test are different kinds.

1. Individual test of intelligence.

It is the test of intelligence in which only one individual test at a time.

2. Group test of intelligence.

It is the test of intelligence in which a group of individuals is tested at a time.

3. Verbal test of intelligence.

It also verbal and non verbal test.

In verbal test of intelligence are the test that makes use of language. Individuals are required to use language as well as paper and pencil for giving the response.

nonverbal test are the test in which use language is not necessary. The test content and response do not involve language. However language can be used while giving directions.

Intelligence Quotient [IQ]

IQ is a standard measure of an individual's intelligence level based on psychological test. It is one of many intelligence test. The IQ score is calculated by dividing the test-taker's mental age by his chronological age and then multiplying this number by 100.

eg: A child with a mental age 12 and chronological age of 10 would have IQ of -

$$\frac{12}{10} \times 100 = 120.$$

The concept of IQ was first suggested by William Stearns.

Creativity.

The ability to generate new ideas or new solutions. A creative person has good imagination, good power of expression etc.

Features to improve creativity.

→ Encourage divergent thinking

- Encourage open discussion
- Avoid Sticks
- Ensure Sufficient Sleep
- Sufficient Relax
- Develop confidence

PERSONALITY

The characteristic that make a person-individual unique. It's way of behaviour how we approach, how we behave, how we work.

Basic Personality is the dynamic organisation within the individual / psycho physical system. It implies characteristic features of individual with regard the thinking, behaving.

G.W Allport : Is characteristic way of thinking feeling and behaving that makes a person unique.

Personality is the physical and Psychological factor that determines his unique adjustment with the environment - **G.W Allport**.

Determinance of Personality

Personality is not determined by a single factor. It is formed by several factors - they are -

- Biological factors
- Psychological factors
- Environmental factors

1. Biological factors.

Biological factors includes body structure, physical attractiveness, physical defects, health conditions, chemical conditions etc... All these factors determines a persons personality.

2. Psychological factors.

Psycho Psychological factors determines a persons personality. It includes a persons intelligence, emotional status, self disclosure, achievements, attitude.

3. Environmental factor.

Environmental home atmosphere, education, social deprivation, family atmosphere.

THEORIES OF PERSONALITY

① Type theory.

Type is a class of individuals sharing some common characteristic. ^{the} theory of personality to classify people is to categorize according to their characteristics.

1. Body type theory — William Shaldon
Endomorph — heavy and fat persons and lethargic

People characteristics → peaceful, honour, affectional, social and obedient.

Mesomorph - Energetic, aggressive, athletic, muscular.

characteristics → energetic, active, aggressive, athletic etc.

Ectomorph - Thin person.

characteristics → Sensitive, not sociable

This theory doesn't have any scientific base.

2. Type A and Type B theory.

Type A

- Well organized
- Well planned
- Strict
- Impassioned

Type B

- easily joined and relax
- Not so strict
- Stress free
- Cool mind
- Minor deviation which make them not a strict

B. Extroverts and Introverts.

— Jung

Jung develops personality theory on the basis of psychological characters. He divided the personality into two components they are :- Extroverts
Introverts.

The people who shows the characteristics of extroverts and introverts are called - Ambiverts. It is not possible to develop people in this way. They are several people who show 2 personalities [extroverts and introverts]

Extroverts

- people who are highly social
- They like to mingle with people and they like to be with people.
- They are highly interactive
- They have many friends.

Introvert.

- people who doesn't mingle with people
- They withdraw from the company of others
- They have limited number of friends.
- They are self-centred and highly imaginative
- They like to sit alone.

What are the difference and similarities between the two groups (about their theory)

4 Trait theory

- Allport

Trait is a relatively stable characteristic that causes an individual to behave in certain ways. Personality is composed of a trait, trait is formed personality.

Personality is the dynamic organization within the individual of those Psychophysical systems that determine to unique adjustment to the environment. Allport classified trait into 3 categories they are cardinal trait, Central-trait, and Secondary trait.

1. Cardinal Traits

This trait tend to define a person, but they are rare. The individual may become the synonym for that trait. It is a powerful trait.

2. Central Traits

Traits that forms the foundation of personality of an individual. It forms the basic general characteristics of an individual Not so powerful as cardinal trait

3. Secondary Trait.

They are related to our attitude 1-

preferences. They appear only in certain situations. They are not so powerful, it is also common.

5 Psychoanalytic Theory — Sigmund Freud.

Psychoanalytic means analysis of the mind. This theory describes that childhood experiences and unconscious mind aspects shape our personality. Freud is expert of psychoanalysis. According to him, human personality is composed of 3 elements. They are :- ID, Ego and Superego. These three elements work together to form a personality. These three elements shape our personality and behaviour.

1. ID

It is the primary component of the personality. It is the only component to the personality from our birth. It includes primitive behaviour. It is the immediate gratification of desires and wants. It is influenced by a pleasure principle. It is not satisfied immediately the result is anxiety, tension etc...

2. Ego

It functions in conscious, preconscious, and unconscious. It is component of personality that is responsible for dealing with reality. It is based on reality principles. It tries to satisfy his desire in a socially appropriate ~~base~~ ^{because} ways.

3. Super Ego

- It upholds moral standards
- It is based on morality principle
- It tries to suppress all unacceptable things. It is the gratification of desires.
- It is tries to stabilize our behaviour.

ID, Ego, Super ego are develops our personality

Level of consciousness.

Freud divided human consciousness into three: They are conscious, preconscious and unconscious.

Conscious :- It is the level that includes all those things we are aware of or the things we are aware of ourselves.

Preconscious :- It is the level consist of those things that we can pay conscious attention if we desire. The preconscious level includes

things that are unconscious level but can be retrieved/called back to the memory. It is the level between conscious and unconscious level.

Unconscious :- This mind is reservoir of feelings, memories or thoughts that are outside the conscious mind. It includes many things which we are not aware of. The unconscious mind includes items of unacceptable, or unpleasant, anxiety, we are not aware.

6. Psychosexual Development Theory.

Refer text book

Personality/development takes place in 5 Psychosexual Stage. During these stages sexual energy is expressed in different ways. The 5 Psychosexual Stages are :-

1. Oral Stage
2. Anal Stage
3. Phallic Stage
4. Latency Stage
5. Genital Stage.

Oedipus Complex

Boys may have special attachment with their mother. This is called Oedipus complex.

Electra complex

Girls may have special attachment with their father. This is called Electra complex.

Assessment of Personality.

Personality is assessed by using personality test. Personality tests are divided into 2. Projective test and Non-projective test.

- Non projective test :-

It is a Psychological test that measures the individual characteristic in a way that is independent of the evaluator's bias. It includes writing scale, questionnaires, interviews.

- Projective test.

It is a type of a personality test, the test in which individual response to ambiguous scene, words or images. It reveals hidden personal response.

There are several kinds of personal test. They are :-

a) Rorschach - ^{ink} blot - test

It is a test in which an individual is shown an irregular spot of ink. The test contains 10 ink blot each with ambiguous image. These are shown to the people and response are recorded. Then their responses are interpreted or analyzed.

b) Thematic apperception test (TAT)

Here people are asked to see some ambiguous scenes. Then asks them to tell a story about the scene. It includes what is happening, how the story begins and ends, who are the characters, how the story goes etc. Then their response are analysed.

c) Draw a person test.

It includes our imagination. In this a person is asked to draw a person and now the image is appeared is evaluated.

d) - House - tree - person test

They asked to draw a house, a tree, and a person. Once drawing is complete they ask the questions like who is the person? where home is it? who are visiting their home? etc. By considering the response of the examinee evaluate the person.