



# EDU302 final term 2021

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## 1. Definition of growth.

The term growth denotes a net increase in the size, or mass of the tissue. It is largely attributed to multiplication of cells and increase in the intracellular substance.

### According to Crow and Crow (1962)

Growth refers to structural and physiological changes.

## 1. Definition of development.

Development specify maturation of functions. It is related to the maturation and myelination of the nervous system and indicates acquisition of a variety of skills for optimal functioning of the individual.

## 2. Difference between growth and development.

Growth	development
<ol style="list-style-type: none"><li>1. Growth mainly focuses on quantitative improvement.</li><li>2. Growth ends at maturation.</li><li>3. Growth is dependent on cellular changes.</li><li>4. Growth is associated with the progressive physical change from one stage to another.</li><li>5. Growth is external.</li></ol>	<ol style="list-style-type: none"><li>1. Development is associated with both qualitative and quantitative improvement.</li><li>2. Development is a consistent process and continues throughout life.</li><li>3. Development is dependent on organizational transformation.</li><li>4. development is the gradual transformation of behavioral and skill set changes</li><li>5. Development is an internal process.</li></ol>

## 3. General principles of development.

1. Development is a continues process
2. Development follows a pattern:
3. Development proceeds from general to specific responses
4. Development involves change
5. Development is a product of interaction of the heredity and environment
6. Principle of uniqueness
7. The Principle of Interaction of Maturation and Learning

## 4. Factors influence human development.

Factors influencing human development

- **Environmental factors**, such as income and education, all affect a child's development. A safe community offers a chance to explore. Income affects nutrition, housing, clothing, toys and access to resources and programs. A parent's education may affect how often they read to the child.
- **Biological factors**, including gender and health, affect development. Females and males develop at different rates. Children with health or mental issues develop differently. Nutrition and physical activity affect a child's growth and health.
- A **child's relationships** are important. Children bond strongly with their parents and play and learn with siblings and peers at school. Some children are involved in Sunday school, daycare or other social groups.
- **Early sensory experiences** affect development. All five senses are involved in a child developing an understanding of the world.

## 5. Main phase of development.

There are two main phases of the process of development i.e the stage or phase of before Birth and the stage or phase of after Birth. The second phase of life has four stages, i.e. Infancy, childhood, Adolescence and Adulthood. The period of infancy covers the period from birth to 5 years, childhood from 6 to 12 years and adolescence from 12 to 18/19 years. Each stage of development has its own specific characteristics.

L#2

## 6. Human growth and maturation.

7. Human growth	Maturation.
<p>Growth is the increase in overall body size with changes in muscle, bone and fat and this affects motor skills. Growth is complicated because:</p> <p>Different parts of the body grow at different rates; periods of growth start and stop at different times.</p> <p>Growth is one of the characteristics of living organisms. It is a process which involves to increase the size and complexity and change the shape of the bodies of living organisms.</p> <p>Growth is irreversible. Growth in humans is rapid at two stages- first, during the period of gestation and two years after the birth of a child and second, during adolescence (the age from 11 to 17 or 18).</p>	<p>Maturation refers to changes that occur naturally, spontaneously and automatically. These are to a large extent, genetically programmed which appear at certain period of age and are relatively unaffected by environment except in cases of malnutrition or severe illness.</p> <p>Maturation has diverse meanings.</p> <p>One meaning that is relevant to the topic of growth is "the process of being mature". This period starts by the end of the puberty in human.</p>

## 7. What is intelligence?

Intelligence is an inferred process that humans use to explain the different degrees of adaptive success in people's behavior.

## **8. What are the forces which influence man's behavior?**

Man's behavior is influenced by two forces: heredity and environment.

## **9. What is heredity?**

The biological or psychological characteristics which are transmitted by the parents to their offsprings are known by the name of heredity. Heredity is, in other words, a biological process of transmission of certain traits of behavior of the parents to their children, by means of the fertilized egg. Heredity traits are innate; they are present at birth.

## **10. What kind of Nature-nurture is involved?**

The nature-nurture issue involves the debate about whether development is primarily influenced by nature or by nurture.

## **11. Write the aspects of human development.**

### **1. Physical Development**

It deals with changes in body structure and functions mainly due to growth or maturation. Therefore, physical development can properly be called as physical growth rather than physical development. Learning plays little role in physical development.

### **2. Social Development**

It refers to changes in the way an individual relates to others. A large part of these changes are due to learning.

### **3. Emotional Development**

It means changes in the way individual becomes capable of understanding, expressing and controlling personal feelings, understanding feelings of others and responding to them. In emotional development maturation and learning both play important role. It is yet debatable that which plays a greater role.

### **4. Intellectual Development**

It refers to changes by which mental processes becomes more complex and sophisticated. Intellectual development is also considered to be under the influence of both heredity (maturation) and environment (learning).

## **12. What is Meta cognition?**

- Metacognition refers to awareness of one's own knowledge---what one does and doesn't know---and one's ability to understand, control, and manipulate one's cognitive processes (Meichenbaum, 1985). "Metacognition" is often simply defined as "thinking about thinking."

“Metacognition refers to higher order thinking which involves active control over the cognitive processes engaged in learning.

### **13. What is forgetting? Write theories of forgetting.**

The loss of information or the inability to access previously encoded information within memory.

Two possible answers:

→ Forgetting information from “Short Term Memory (STM)” can be explained using the theories of “Trace Decay” and “Displacement”

→ Forgetting from “Long Term Memory (LTM)” can be explained using the theories of “Interference” and “Lack of Association”

### **14. What is retrieval cue?**

“Any stimulus that assists the process of locating and recovering information stored in memory” (Grivas et al 2011).

#### **Retrieval cues...**

- Examples of retrieval cues include:
- Questions
- Emotional states such as happiness or depression
- Physical states such as being intoxicated or in pain
- Environmental cues such as sights, sounds and smells within that specific situation

### **15. What are tips of tongue phenome?**

A type of retrieval failure is the tip of the tongue phenomenon (TOT).

**Definition:** The tip---of---the---tongue phenomenon is the term for the temporary inability to remember something you know, accompanied by a feeling that it is just out of reach.

### **16. Due to failure of retrieval cue why we forget sometimes?**

According to this theory, we forget because we are not able to use the correct cues to retrieve or access information. Forgetting occurs when information is available in LTM but is not accessible.

### **17. Name the retrieval failure theory?**

Cue-dependent forgetting.

### **18. What are strength and limitations of retrieval failure theory?**

#### **❖ STRENGTHS...**

- . There is research evidence to support it.
- Studies of recall versus recognition show that the amount of forgetting can be greatly reduced when retrieval cues are made available, e.g. Meyer & Hilterbrand (1984).
- The tip-of-the-tongue phenomenon is a frequent reminder that we have information stored in memory that we cannot access, until we find the right cue

## LIMITATIONS

- The theory doesn't explain why there is a failure to retrieve some memories but not others.

### 19. Define the motivational forgetting.

This theory describes forgetting as a defense mechanism in which people are motivated or desire to forget unwanted or disturbing memories, either consciously (suppression) or unconsciously (repression). Motivated forgetting is based on Freud's theory that people create a defense mechanism to protect themselves from painful experiences. Motivated forgetting has been an aspect of psychological study relating to such traumatizing experiences as torture, war, natural disasters, rape and murder.

### 20. What are attributes of intelligence?

Three broad attributes:

Verbal ability, practical problem solving, and social competence

### 21. Difference between crystalized, fluid and creative intelligence.

Crystallized intelligence	Fluid intelligence	Creative intelligence
Crystallized intelligence refers to skills that depend on accumulated knowledge and experience, good judgment, and mastery of social customs-abilities acquired because they are valued by the individual's culture. In other words crystallized intelligence involves knowledge and comprehension which is considered important in a specific culture but which varies from culture to culture	Fluid intelligence depends more heavily on basic information-processing skills- the ability to detect relationships among stimuli, the speed with which the individual can analyze information, and the capacity of working memory. Fluid intelligence is assumed to be influenced more by conditions in the brain and less by culture.	Try to solve new kinds of problems that require us to think about the problem and its elements in a new way (e.g., inventing, designing) • Creative intelligence relates to the way a person approaches new information or a new task. You may also hear creative intelligence referred to as experiential intelligence. It involves a person's ability to apply their existing knowledge to new problems.

### 22. What is three stratum theory of intelligence?

Using improved factor-analytic methods, John Carroll (1993, 1997) reanalyzed relationships between items in hundreds of studies.

His findings yielded a three-stratum theory of intelligence that elaborates the models proposed by Spearman, Thurstone, and Cattell. Carroll represented the structure of intelligence as having three tiers. In the second tier are an array of broad abilities, which Carroll considered to be the basic biological components of intelligence; they are arranged from left to right in terms of decreasing relationship with "g." In the third tier are narrow abilities-specific behaviors through which people display the second-tier factors.

Carroll's model is the most comprehensive factor-analytic classification of mental abilities to date. It provides a useful framework for researchers seeking to understand mental test performance in cognitive-processing terms. It also reminds us of the great diversity of intellectual factors. Currently, no test measures all of Carroll's factors.

Sternberg's (1997, 2001, and 2002) tri-archic theory of successful intelligence identifies THREE broad, interacting intelligences:

- analytical intelligence, or information-processing skills;
- creative intelligence, the capacity to solve novel problems
- practical intelligence, application of intellectual skills in everyday

### **23. What is Carroll model?**

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### **24. What is Sternberg triachic theory of intelligence?**

Robert Sternberg defines intelligence as:

“The cognitive ability to learn from experience, to reason well, to remember important information, and to cope with the demands of daily living.”

### **SUCCESSFUL INTELLIGENCE**

Sternberg believes that intelligence has less to do with success in the classroom and more to do with success in the real world. He refers to the ability to achieve success in life as “successful intelligence.” He believes that people have three types of intelligence and that “successfully intelligent” people learn to balance the three types of intelligence effectively

**L#3**

### **25. Gardner theory of intelligence.**

When you think of intelligence you normally think of the one intelligence that must be preferred to and that is intellectual intelligence. Howard Gardner says there are actually multiple types of intelligences. Lets go through all these one by one

**1. Logical mathematical intelligence**

- Solving math and logic problems
- Taking tests in which high logical intelligence is required
- Ability to make and read graphs
- Organization of things

**2. Verbal linguistic**

- People with high verbal linguistic intelligence probably they are good at:
- Poems
- Rhyming words
- Reading and writing
- Story teller

**3. Interpersonal intelligence**

- Understanding other people's emotions
- Understanding social etiquettes and norms are of the different situations
- Good leader or manager and have to coordinate with employees then you might have good interpersonal intelligence

**4. Body Kinesthetic Intelligence**

- Ability to use the body purposefully
- People excellent in their bodily kinesthetic field are
- Dancers
- Actors
- Solders
- Sports athletes

**5. Musical Intelligence**

- This is associated with rhythmic and harmonic music
- Being able to interpret sounds, rhythms and tones and pitches
- Probably compose or at least play an instrument

**6. Visual Spatial**

- Its basically is how well you visualize something in your mind's eye
- How well you can think about something in your mind

Example

- How well you get through a maze
- How you read a map?

**7. Intrapersonal intelligence**

- Different from interpersonal intelligence
- This is more about how you understand your self
- Are you self aware or not?
- How well you can control your emotions and moods?
- You know your strengths and weaknesses?

### **8. Naturalistic intelligence**

- You can recognize and classify all types of animals, plants and minerals in the real world
- Hunters and fisherman are pretty intelligent in naturalistic field Sheff's and botanists

### **26. What is the scale to measure the intelligence?**

Intelligence is measured through intelligence testes that are individual's tests (Stanford-Binet test) as well as group tests (Wechsler tests). Intelligence testing began in early 1900's when Alferd Binet and Simon developed the first individual intelligence test to identify those children who could not profit from normal classroom instruction and required special education. This test, after four revisions, is still used to measure the intelligence. It consists of school related task and intellectual skills needed to do well in school. Initially, 'mental age' of the students was determined.

For example, if a child succeeded on all items meant for 6 years old, he was considered to have mental age of 6 whether the child was actually more or less in physical age. Later, the concept of 'intelligent quotient' (IQ) was added. The formula of calculating IQ, presently known as Ration IQ is no longer used. Instead deviation IQ is calculated these days by comparing the performance of the person with his age group. The value of IQ is used for predicting school achievement.

### **27. What is personality?**

Shaffer defines personality as a broad collection of attributes and distinctive patterns of behavior or habits that seem to characterize an individual on temperament, traits, interests, attitudes and values. Personality is individual's characteristic pattern of perceiving, thinking, feeling and continuing over time.

### **28. Theories of personality.**

- Type Theories
- Trait Theories
- Psychodynamic Theories
- Learning Theories
- Humanistic Theories
- Cognitive Theories
- Erikson's Theory of Personality Development

### **29. What is extraversion?**

High score on 'extraversion' indicates that the individual is oriented primarily towards the external world of people and experiences while low scores show him to be more withdrawn and more concerned with his inner states of mind ( a condition which Eysenck terms as 'introversion').

### **30. Neuroticism**

High scores on 'neuroticism' indicate that the person is more inclined to anxiety and fear while low scores show good psychological balance (termed as stability).

### **31.Psychoticism**

High 'psychoticism' scores indicate an individual who is relatively independent, tough-minded, aggressive and cold while low scores go with dependency and tender mindedness (loving or caring).

### **32.Psychodynamic theories**

- Trace the development of personality and stress the unconscious determinants of human personality which lead to differing personality traits. These personality characteristics originate during early years of life due to inappropriate (too much or too less) need gratification that may result fixation at one stage which is reflected in adult personality traits.
- The individual is presently unaware of these traumatic, anxiety creating experiences because these have been pushed back into the unconscious part of human mind.
- Sigmund Freud is the founding father of psychodynamic theories whose explanations about personality development were later revised and extended by his students.
- Erik Erikson was one of his most distinguished students who disagreed with his teacher and believed that, instead of biological instincts, social aspects of culture shape human personality. Erikson's theory offers more promise than Freudian Theory in education

### **33.Personality assessment techniques**

- Subjective Methods.
- Objective Methods.
- Projective Methods.
- Psycho-Analytical Methods.
- Physical Test Methods or Physiological Methods.

### **34.Miniature life situation**

In miniature life situations, artificial situations resembling real life situations, are created and the subject's reactions and behavior are observed and evaluated. Situations involving honesty, cooperation, persistence, and team-work can be created and the subject's behavior may be noted and judged accordingly. For selection of leaders in the army, this method is often used with great advantage. Reactions to failure and success may also be evaluated by putting subjects in situations where they fail and get frustrated or gratified.

### **35.The thematic appreciation test**

(TAT) developed by Murray and Morgan (1935) consists of a series of 20 pictures. The person is asked to tell the story that each one suggests to him. These pictures are arranged in appropriate groups for male and female adults and for children. On each picture, the subject tells the story by identifying the characters, explaining their relationships to each other, describing what preceded the situation shown in the picture, and stating an outcome. These theme projects implicit attitudes, habits of thought, ideals and drives of the subject, as well as the characteristics of the other characters- father, mother, brother, sister, husband and wife. The Rorschach test throws light on the structures of personality whereas the TAT throws light on the functioning of personality.

### **36.Children appreciation test**

This test was constructed Bellack in 1948. It is used to assess the personality of children up to twelve years of age. Young children are very much interested in listening to stories about animals and in playing with animals. Before administering the test, Psychologist establishes rapport with the chief so as to win his cooperation. CAT brings to light the child's repressed desires.

### **37.The psycho-analytic test**

This method was propounded by Sigmund Freud, the father of the School of Psycho-analysis. Two types of tests, in the Psycho-analytic method of investigation of Personality are very popular viz.:

(1) Free Association Test.

(2) Dream Analysis Method.

Both these tests show the peculiarities of the Personality, in its unconscious aspect. In the dream analysis, the subject describes his dream and without using the mind, meaning thereby the unrestricted state of the mind associates freely the dream objects and activities. Because of the absence of the mental element, the truth of the unconscious mind is expressed by which the psycho analyst discovers many peculiarities of a character. Its main difficulty lies in the need for a skilled and experienced psycho-analyst. Often the psycho-analyst analyses his own mind in order to remove the possibility of any prejudice.

### **38.Physical test method**

In physiological methods of assessment of personality following instruments are commonly used:

#### **1. Pneumograph:**

It is used for measuring the rate of respiratory activity of the individual.

#### **2. Plethysmograph:**

It is used for measuring the individual's Blood pressure.

#### **3. Shymograph:**

It is used for measuring the activity of heart.

#### **4. Electrocardiograph:**

It is used for measuring the activity-of-heart.

#### **5. Electro-encephalograph:**

It is used for measuring the electrical activity in the human brain,

#### **6. Graphology:**

The individual's personality is assessed through a study of his handwriting.

## 7. Electromyogram:

It is used for measuring muscular activity.

## 39. Developmental task theory

1. Although many theorists are responsible for contributing to the Developmental Tasks Theory, it was Robert J. Havighurst who elaborated this theory in a most systematic and extensive manner.
2. Havighurst main claim is that development is continuous throughout the entire lifespan, occurring in stages, where the individual moves from one stage to the next by means of successful resolution of problems or performance of developmental tasks.
3. These tasks are those that are typically encountered by most people in the culture where the individual belongs. If the person successfully accomplishes and masters the developmental task, he feels pride and satisfaction, and consequently earns his community or society's approval. This success provides a sound foundation which allows the individual to accomplish tasks to be encountered at later stages.
4. Conversely, if the individual is not successful at accomplishing a task, he is unhappy and is not accorded the desired approval by society, resulting in the subsequent experience of difficulty when faced with succeeding developmental tasks. This theory presents the individual as an active learner who continually interacts with a similarly active social environment.
5. From examining the changes in your own life span you can see that critical tasks arise at certain times in our lives. Mastery of these tasks is satisfying and encourages us to go on to new challenges. Difficulty with them, slows progress toward future accomplishments and goals.

## 40. Developmental theory task

Three sources of developmental tasks (Havighurst, 1972)

1. **Tasks that arise from physical maturation.** For example, learning to walk, talk, and behave acceptably with the opposite gender during adolescence; and biological development
2. **Tasks that from personal sources.** For example, those that emerge from the maturing personality and take the form of personal values and aspirations, such as learning the necessary skills for job success.
3. **Tasks that have their source in the pressures of society.** For example, learning to read or learning the role of a responsible citizen.

## 42. Stages

### Stage 1

*Infancy - Early Childhood (birth to 5 years)*

- Learning to take solid foods
- Learning to walk.
- Learning to talk
- Learning to control the elimination of body wastes
- Learning gender differences
- Forming concepts and learning language to describe social and physical reality.
- Getting ready to read

## **Stage 2**

### ***Middle Childhood (6 to 12 years )***

1. Learning physical skills necessary for ordinary games.
2. Building wholesome attitudes toward oneself as a growing organism
3. Learning to get along with age-mates
4. Learning an appropriate masculine or feminine social role
5. Developing fundamental skills in reading, writing, and calculating
6. Developing concepts necessary for everyday living.
7. Developing conscience, morality, and a scale of values
8. Achieving personal independence
9. Developing attitudes toward social groups and institutions

## **Stage 3**

### ***Adolescence (13 to 18 years)***

1. Achieving new and more mature relations with age-mates of both sexes
2. Achieving a masculine or feminine social role
3. Accepting one's physique and using the body effectively
4. Achieving emotional independence of parents and other adults
5. Preparing for marriage and family life preparing for an economic career
6. Acquiring a set of values and an ethical system as a guide to behavior; developing an ideology
7. Desiring and achieving socially responsible behavior

## **Stage 4**

### ***Early adulthood (19 to 29 years)***

1. Selecting a mate
2. Achieving a masculine or feminine social role
3. Learning to live with a marriage partner
4. Starting a family
5. Rearing children
6. Managing a home
7. Getting started in an occupation
8. Taking on civic responsibility
9. Finding a congenial social group

## **Stage 5**

### ***Middle Adulthood (30-60 years)***

1. Maintaining economic standard of living
2. Performing civic and social responsibilities
3. Relating to spouse as a person
4. Adjusting to physiological changes

## **Stage 6**

### ***Later Maturity (60>)***

1. Adjusting to deteriorating health and physical strength
2. Adjusting to retirement
3. Meeting social and civil obligations
4. Adjusting to death or loss of spouse

## **41. Contributions of Erikson?**

### **Contributions of Erikson**

- Personality develops throughout the lifetime
- Identity crisis in adolescence
- Impact of social, cultural, personal and situational forces in forming personality

## 42. Criticism on Erikson

### Criticisms of Erikson

- Ambiguous terms and concepts
- Lack of precision
- Some terms are not easily measured empirically
- Experiences in stage may only apply to males
- Stages are not mutually exclusive, neither do they fit in neatly packaged age intervals
- The order of the stages may not be same for every one e.g., gender difference etc.
- Identity crisis may only apply to those affluent enough to explore identities

### L#5

## 43. What is learning?

“A persisting change in human performance or performance potential . . . (brought) about as a result of the learner’s interaction with the environment” (Driscoll, 1994, pp. 8-9).

“The relatively permanent change in a person’s knowledge or behavior due to experience” (Mayer, 1982, p. 1040).

## 44. How do people learn?

A: Nobody really knows.

But there are 3 main theories:

- Behaviorism
- Social Learning Theory
- Cognitivism

## 45. Social learning theory

Bandura’s Social Learning Theory postulates that people learn from one another, via observation, imitation, and modeling; people learn through observing others’ behavior, attitudes, and outcomes of those behaviors. (Grusec, 1992) .

### Social Learning Theory

- “Most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action.” (Bandura).

- Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences. (Grusec, 1992)
- Bandura believed in “reciprocal determinism”
- The world and a person’s behavior cause each other
- One’s environment causes one’s behavior
- Behavior causes environment (Ormrod, 1999)

According to Bandura, personality is shaped by an interaction among cognitive factors, behaviors and environmental factors. This interaction is termed reciprocal determinism.

### **46. Learning comes through?**

Learning comes from observing other’s behavior and observing the consequences of the behavior

1. Attention. The learner must attend the behavior
2. Retention. The learner must remember the behavior
3. Motor reproduction. The learner must be able to act what she has seen
4. Motivation. The learner must feel motivated to demonstrate what he/she has learned.

### **47. Factors which may influence learning**

Factors that may influence learning

- **Consistency.** The model (the person the learner is imitating) behaves in a way that is consistent across situations
- **Identification:** The learner can identify with the model
- **Rewards/punishment.** We can learn from the consequences of the models’ behaviour. (Vicarious learning)
- **Liking:** The more we like the model, the more likely we are to imitate his or her behaviour.

### **48. Strengths of theory**

**Evaluation of theory – strengths**

- Empirical support (e.g. studies, mirror neuron research, animal observations of social learning)
- Application (education, therapy)
- To understand learning, aggression, depression, to predict behaviour
- Interactionist – emphasizes dispositional (a person's inherent qualities of mind and character.), situational and sociocultural factors.

### **49. Piaget theory of cognitive learning**

- Jean Piaget's theory of cognitive development suggests that children move through four different stages of mental development. His theory focuses not only on understanding how children acquire knowledge, but also on understanding the nature of intelligence.
- Piaget believed that children took an active role in the learning process, acting much like little scientists as they perform experiments, make observations, and learn about the world.
- As kids interact with the world around them, they continually add new knowledge, build upon existing knowledge, and adapt previously held ideas to accommodate new information.

## **50. Stages of cognitive learning**

### **The Sensorimotor Stage (Ages: Birth to 2 Years)**

Major Characteristics and Developmental Changes:

- The infant knows the world through their movements and sensations
- Children learn about the world through basic actions such as sucking, grasping, looking, and listening
- Infants learn that things continue to exist even though they cannot be seen (object permanence)
- They are separate beings from the people and objects around them
- They realize that their actions can cause things to happen in the world around them

### **The Preoperational Stage (Ages: 2 to 7 Years)**

Major Characteristics and Developmental Changes:

- Children begin to think symbolically and learn to use words and pictures to represent objects.
- Children at this stage tend to be egocentric and struggle to see things from the perspective of others.
- While they are getting better with language and thinking, they still tend to think about things in very concrete terms.

### **The Concrete Operational Stage (Ages: 7 to 11 Years)**

Major Characteristics and Developmental Changes

- During this stage, children begin to think logically about concrete events
- They begin 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 example
- Their thinking becomes more logical and organized, but still very concrete
- Children begin using inductive logic, or reasoning from specific information to a general principle

### **The Formal Operational Stage (Ages: 12 and Up)**

Major Characteristics and Developmental Changes:

- At this stage, the adolescent or young adult begins to think abstractly and reason about hypothetical problems
- Abstract thought emerges
- Teens begin to think more about moral, philosophical, ethical, social, and political issues that require theoretical and abstract reasoning
- Begin to use deductive logic, or reasoning from a general principle to specific information

### **51. What is 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.

### **52. What is assimilation?**

The process of taking in new information into our already existing schemas is known as assimilation. The process is somewhat subjective because we tend to modify experiences and information slightly to fit in with our preexisting beliefs. In the example above, seeing a dog and labeling it "dog" is a case of assimilating the animal into the child's dog schema.

### **53. What is accommodation?**

Another part of adaptation involves changing or altering our existing schemas in light of new information, a process known as accommodation. Accommodation involves modifying existing schemas, or ideas, as a result of new information or new experiences. New schemas may also be developed during this process.

### **54. Equilibrium**

Piaget believed that all children try to strike a balance between assimilation and accommodation, which is achieved through a mechanism Piaget called equilibration. As children progress through the stages of cognitive development, it is important to maintain a balance between applying previous knowledge (assimilation) and changing behavior to account for new knowledge (accommodation). Equilibration helps explain how children can move from one stage of thought into the next.

## **L#6**

### **55. What is constructivism?**

Constructivism Is an approach to teaching and learning based on the idea that cognition is the result of "mental construction". In other words, students learn by fitting new information together with what they already know. Constructivists believe that learning is affected by the context in which an idea is taught as well as by students' beliefs and attitudes. The learner actively imposes organization and meaning on the surrounding environment and constructs knowledge in the process. The teacher's role is not only to observe and assess but to also engage with the students while they are completing activities, wondering aloud and posing questions to the students for promotion of reasoning.

## **56.Sociocultural theory**

Vygotsky's sociocultural theory of human learning describes learning as a social process and the origination of human intelligence in society or culture. The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition.

## **57.Zone of proximal development with context of theory**

The difference between what a child can do independently and what the child needs help from a more knowledgeable person to do.

## **58.What is scaffolding?**

“Role of teachers and others in supporting the learner’s development and providing support structures to get to the next stage or level” Vygotsky.

A knowledgeable participant can create by means of speech and supportive conditions in which the student (novice) can participate in and extend current skills and knowledge to a high level of competence. In an educational context, however, scaffolding is an instructional structure whereby the teacher models the desired learning strategy or task then gradually shifts responsibility to the students.

- Provides support
- Extends the range of what a learner can do.
- Allows the learner to accomplish tasks otherwise impossible
- Used only when needed

## **59.Humanistic approach**

The humanistic approach emphasizes the personal worth of the individual, the centrality of human values, and the creative, active nature of human beings. The approach is optimistic and focuses on the noble human capacity to overcome hardship, pain and despair.

## **60.Maslow hierarchical needs**

Maslow's theory presents his hierarchy of needs in a pyramid shape, with basic needs at the bottom of the pyramid and more high-level, intangible needs at the top. A person can only move on to addressing the higher-level needs when their basic needs are adequately fulfilled.

- **Physiological needs:** The first of the id-driven lower needs on Maslow's hierarchy are physiological needs. These most basic human survival needs include food and water, sufficient rest, clothing and shelter, overall health, and reproduction. Maslow states that these basic physiological needs must be addressed before humans move on to the next level of fulfillment.

- **Safety needs:** Next among the lower-level needs is safety. Safety needs include protection from violence and theft, emotional stability and well-being, health security, and financial security.
- **Love and belonging needs:** The social needs on the third level of Maslow's hierarchy relate to human interaction and are the last of the so-called lower needs. Among these needs are friendships and family bonds—both with biological family (parents, siblings, and children) and chosen family (spouses and partners). Physical and emotional intimacy ranging from sexual relationships to intimate emotional bonds are important to achieving a feeling of elevated kinship. Additionally, membership in social groups contributes to meeting this need, from belonging to a team of coworkers to forging an identity in a union, club, or group of hobbyists.
- **Esteem needs:** The higher needs, beginning with esteem, are ego-driven needs. The primary elements of esteem are self-respect (the belief that you are valuable and deserving of dignity) and self-esteem (confidence in your potential for personal growth and accomplishments). Maslow specifically notes that self-esteem can be broken into two types: esteem which is based on respect and acknowledgment from others, and esteem which is based on your own self-assessment. Self-confidence and independence stem from this latter type of self-esteem.
- **Self-actualization needs:** Self-actualization describes the fulfillment of your full potential as a person. Sometimes called self-fulfillment needs, self-actualization needs occupy the highest spot on Maslow's pyramid. Self-actualization needs include education, skill development—the refining of talents in areas such as music, athletics, design, cooking, and gardening—caring for others, and broader goals like learning a new language, traveling to new places, and winning awards.

**L#7**

### **61. What is moral development?**

Moral development is the gradual development of an individual's concept of right or wrong – conscious, religious values, social attitudes and certain behaviour.

### **62. Kohlberg theory**

This theory is a stage theory. In other words, everyone goes through the stages sequentially without skipping any stage. However, movement through these stages are not natural, that is people do not automatically move from one stage to the next as they mature. In stage development, movement occurs when a person notices inadequacies in his or her present way of coping with a given moral dilemma. According to stage theory, people cannot understand moral reasoning more than one stage ahead of their own. For example, a person in Stage 1 can understand Stage 2 reasoning but nothing beyond that

### **63. Gilligan's theory of moral development?**

## **PIONEER OF GENDER STUDIES**

- Born in 1936
- Student of Lawrence Kohlberg
- Worked with Erik Erikson
- Did research with Lawrence Kohlberg
- Criticized Kohlberg's Theory of Moral Development
- Famous for her work in psychological and moral development of girls
- Taught at Harvard for 30 years; was first professor of gender studies there

## **MORALITY AND GENDER**

- Male approach is that individuals have basic rights and one must respect the rights of others
- Female approach is that people have responsibilities towards others
- Morality imposes restrictions on what one can do
- Morality is an imperative to care for others
- Justice orientation
- Responsibility orientation

### **64. Stages of moral development?**

## **STAGES OF MORAL DEVELOPMENT**

1. Selfish Stage
2. Belief in Conventional Morality
3. Post-Conventional Stage

## **MORE ABOUT STAGES**

- Young girls start out with a selfish orientation; then learn to care for others
- Women learn that it is wrong to act in their own interests; others' interests are more important
- Learn that it is just as wrong to ignore their own interests as it is to ignore others' interests; learn this through connecting with others

### **65. Criticism of Gilligan's theory?**

- Theory is based on moral decisions in an actual real life situation. Findings may not apply in ALL situations.
- Data was collected on women ONLY.
- Gilligan also never published her data in peer-reviewed journals.

## **Lecture# 8**

### **66. Stages of development?**

- Stages of Development (According to School Level)

- Preschool and kindergarten (3-6 years)
- Primary grades: 1,2, and 3 (6-9 years)
- Elementary grades: 4, 5 and 6 (9-12 years)
- Junior high school: 7,8, and 9 (12-14 years)
- Senior high school: 10,11 and 12 (15-18 years)

- **Preschool & Kindergarten (3-6 years)**

Children have the first exposure with school routine whereby they interact with more than a few peers. They get opportunities to prepare for initial academic experiences in group settings. It is important for them to learn to follow directions and get along with other.

- **Primary Grades 1, 2 & 3 (6-9 years)**

This age is the age of first experiences with school learning. Children are eager to learn reading and writing who are likely to be upset due to lack of progress in academics. They learn initial attitudes toward schooling. Initial roles in a group setting are formed. These roles may establish a lasting pattern, for instance as a leader, follower, athlete, underachiever etc.

- **Elementary Grades 4, 5 and 6 (9-12 years)**

During these grades, the initial enthusiasm and natural curiosity and eagerness for learning may generally fade away due to lack of success in perfecting more difficult academic skills. Differences in knowledge and skills of fastest and slowest learners become more visible. Automatic respect for teachers tends to decrease. Physical growth spurt and puberty lead to greater awareness in gender roles.

- **Junior High School 7, 8 and 9 (12-15 years)**

During their grades, growth spurt and puberty influence, many aspects of student's behaviour. Peers (age-follows) begin to influence them more than parents and teachers. Acceptance by peers becomes extremely important to them. Students showing poor school performance have feelings - of bitterness, resentment and restlessness.

- **Senior High School; 10, 11, 12 (16-18 Years)**

During this stage, physical maturity is, by and large, achieved which influences many aspects of students' behaviour. Peer group and reactions of friends become extremely important for the adolescents. They are concerned about what will happen after they complete this stage, especially those not intending to pursue further education. They become aware of the importance of academic ability and grades for certain career patterns. They have to make certain value decisions about morality and ethics.

## **67. Concentrate abstract thinking?**

Abstract thinking is the ability to understand concepts that are real, such as freedom or vulnerability, but which are not directly tied to concrete physical objects and experiences. Abstract thinking is the ability to absorb information from our senses and make connections to the wider world

## Lecture 11

### 68. Transfer of learning?

Transfer of learning has been defined by Mayer and Wittrock as "whenever something previously learnt influences current learning or when solving an earlier problem affects how you solve a new problem.

### 69. Theories of learning?

#### Theories of Transfer of Learning

##### (1) The Doctrine of Formal Discipline

- During early 1900s, such subjects as Latin, Greek and Geometry were taught because these were considered difficult to learn; It was expected that by learning these subjects, students would improve ability to memorize, think and reason.
- These enhanced abilities were then expected to facilitate learning less difficult subjects.
- The rationale behind this practice was that human mind could be made stronger with mental exercise like body muscles that are made stronger with physical exercise.
- The researchers lent limited support to this early explanation of transfer of learning. Studying Latin and Greek results in better subsequent learning in Latin and Greek (specific transfer) but does not contribute to learning other subjects (general transfer) which was claimed by it.

##### (2) The Theory of Identical Elements

- In early 1900s, Thorndike and Woodworth proposed an alternative behavioral explanation of how transfer occurs.
- They argued that the degree to which knowledge and skills acquired in learning one task can help depends on how similar the two tasks are.
- If the learner recognizes the similarities between task's stimulus and response elements as in riding a bicycle and a motorcycle, the greater will be the amount of transfer. This idea is known as the theory of identical Elements.

### 70. Types of transfer learning?

#### Types of Transfer of Learning

Thorndike and other psychologists have also identified different types of transfer and the conditions under which each type occurs. A useful distinction is made between positive transfer, negative transfer and zero transfer.

#### POSITIVE TRANSFER

- Positive transfer is defined as a situation in which previous learning helps subsequent learning.
- Positive transfer occurs when a new learning task calls for essentially the same response that was made to a similar, earlier learnt task stimulus.

- The person who is fluent in French, for instance, is likely to learn Spanish more easily.

### **General Transfer**

- General transfer is that positive transfer which is due to use of some learning strategies such as elaboration, imagery and mnemonic devices.
- For example, learning a foreign language helps learning another foreign language because the general learning strategies are the same.
- Still another useful distinction is made by Gagne, that is, vertical transfer and lateral transfer.

### **Vertical Transfer**

- Vertical transfer is that positive transfer which occurs when previously learnt capability helps in learning more complex material in the same area.
- For example, learning to determine different types of triangles helps in forming the concept of equilateral triangle, right angled triangle, etc.

### **Lateral Transfer**

- Lateral transfer is that positive transfer when a previous learnt capability is used in solving a similar problem in a different context.
- For example, previously learnt rules and procedures for conducting experiments in Physics are used to conduct experiments in Biology. Lateral transfer is essentially the same as general transfer. Both involve using the cognitive strategies.

### **Negative Transfer**

- Negative transfer is defined as a situation in which prior learning interferes with subsequent learning.
- Negative transfer occurs when two tasks are highly similar but require different responses, for example, pronouncing the words that spell alike but are pronounced differently.

### **Zero Transfer**

- Zero transfer is defined as a situation in which previous learning has no effect on subsequent, new learning.
- Zero transfer occurs when two tasks have different stimuli and different responses

## **71.Cognitive view of transfer?**

This view of transfer emphasizes the role of comprehension and memory in transfer of learning and is based on information' processing theory of learning. According to information processing theory, we store and retrieve information in memory in a highly systematic fashion. The storage and retrieval processes are strongly influenced by comprehension. Comprehension is learner's ability to relate new information to previously acquired knowledge. Previously acquired knowledge exists in memory in the form of schemata (mental representations of relationships among objects and events). A schema is a structure with many slots for people, objects and events. In the cognitive view, transfer of learning involves activation of previously acquired schema when

one encounters a new learning situation. If the activated schema is appropriate for the new task, learning could occur more readily. If the new information does not match one of slots in the schema, learning becomes difficult.

## **Lecture12**

### **72.Forms of thinking?**

The forms have distinctive educational purposes, even though they sometimes overlap, in the sense that one form may contribute to success with another form. Consider three somewhat complex forms of thinking that are commonly pursued in classroom learning:

- (1) Critical Thinking,**
- (2) Creative Thinking,**
- (3) Problem-solving.**

### **73.Measurement of creativity?**

Torrance has developed TWO types of creativity tests: verbal and graphic

- **Verbal Test**

In verbal tests, a child is asked how, for example, a toy can be changed to make it more fun to play with or think of many uses of a tin as possible.

- **Graphic Test**

In the graphic test, a person may be given a number of circles and asked to create a different drawing from each circle. The responses are then scored for originality (new responses), fluency (number of responses) and flexibility (different responses)

## **Lecture 13**

### **74.Creativity in classroom?**

- According to social psychologists, creativity is a function of social and psychological environment. Creativity must be fostered because many social, environmental and economic problems require creative solutions.
- Teacher can promote creative thinking in their students by creating classroom environment for creative thinking.
- Often teachers consciously or unconsciously discourage creative ideas of students without realizing that they are doing so.
- Teachers are in excellent position to encourage or discourage creativity through acceptance or rejection of the unusual and the imaginative ideas of students.

### **75.Instructional strategies that stimulate complex thinking?**

- Teacher-directed Instruction
- Lectures and Readings

- Advance Organizers
- Recalling and Relating Prior Knowledge
- Elaborating Information
- Organizing New Information
- Concept Map

### **76. Elaborating information?**

- Elaborating new information means asking questions about the new material, inferring ideas and relationships among the new concepts.
- Such strategies are closely related to the strategy of recalling prior knowledge as discussed above: elaboration enriches the new information and connects it to other knowledge. In this sense elaboration makes the new learning more meaningful and less arbitrary or random.

### **77. Benefits of concept maps**

- Aids in Creating a Presentation
- Concept mapping can help someone creating a presentation to organize it in a logical format.
- Allows for Quick Interpretation
- With a concept map, people can often grasp ideas much more quickly than by reading them in an article or book
- Illustrates the Hierarchy of Ideas
- A concept map helps people to understand the hierarchy of ideas, understanding how each component relates to the others.
- Aides in Visualizing Outcomes
- It can also help people to understand the possible indirect results of an action or program.

### **78. What is individual differences?**

According to the dictionary of education

- Individual differences stand for the variation or deviations among individuals in regard to a single characteristic or number of characteristics.
- It stands for those differences which in their totality distinguish one individual from another. So, we can say that individual differences are the differences among humans that distinguish or separate them from one another and make one a single unique individual.

### **79. Types of individual differences?**

Following are the types of individual differences

- **Differences in Interest**

Interest may refer as a motivating force that compels us to attend to a person, a thing, or an activity. So in educational field differences in interest means you observe some students like a particular subject, teacher, hobby or profession than other.

- **Difference in Attitude**

Difference in attitude is psyche related to something. Few learners have positive attitude towards a specific topic, subject, and profession than other. The role of education in society is to develop positive attitude.

- **Difference in Values**

Values are the things that are given importance by an individual. Some learners value materialist life style other moral or religious life style etc. So education must mould the mind of young generation to have a balance values between materialism and spiritualism.

- **Study Habits**

It is clearly observable that some students markedly differ from other students in study habits. Some students are studious and study all the subjects with interest but other may not. Some study in isolation and some in group.

- **Difference in Psychomotor Skills**

Psychomotor Skill is related to some skill acquisition. Some students differ in this area also. Some students like football, other cricket, etc. Some students easily learn operating a machine and some may not. A wise teacher should diagnose students' psychomotor skills abilities and encourage them in that direction.

- **Difference in Self Concept**

Difference in self-concept is the totality of attitudes, judgment, and values of an individual relating to his behavior, abilities, and qualities. So some students have positive self-concept than boost their confidence level and perform better against those who have negative self-image.

## **80. Causes of individual differences?**

The followings are the main causes of individual differences:

### **1. Hereditary (Nature)**

Individuals have various abilities, and capacities provided by hereditary. Which decide the path of progress and development of an individual. Hereditary also put limits upon individuals' growth and development in various dimensions. Hereditary also contributes to both genders, intelligence, and other specific abilities.

### **2. Environment (Nurture)**

Environment also plays key role in individual differences. No person from birth to death gets the same environment. Individual differences occur on the basis of simulation received by individual from his or her internal and external environment. This may include family set up, peer group, economic statues, education etc. It is debatable that whether nature or nurture play vital or stronger role in development of an individual in specific direction. Both are strong contenders in order to distinguish one individual from other.

## **81.Types of exceptional children?**

The U.S. Federal Department of Health and Education has following types of children in the list of handicapped children:

- **Deafness**
- **Hardness of hearing**
- **Blindness**
- **Visual impairments**
- **Speech impairments**
- **Physical and health impairments**
- **Mental retardation**
- **Learning disabilities**
- **Emotional disturbance**





# DIGITAL LEARNING

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