I. The Child and Adolescent Learner

**Childhood**- Childhood is defined as the time for a boy or girl from birth until he or she is an adult. It is more circumscribed period of time from infancy to the onset of puberty. The Convention of the Rights of the Child defines a child as “every human being below the age of 18 years unless under the law applicable to the child, majority is attained earlier”.

**Adolescence**- According to Stuart Judge, a noted educator and psychologist, adolescence is the period of transition from childhood to adulthood. Although sometimes described as beginning in parallel with fertility or puberty and ending with maturity and independence, adolescence has a very variable and imprecise duration. The onset of adolescence cannot be pointed in physiological term, although it is influenced by the same sex hormones and refers to the same general period as physical sexual development. It represents a complex and sometimes disturbing psychological transition, accompanying the requirement for the accepted social behavior of the particular adult and culture (LET, 2015).

II. Basic Concepts of Human Development

1. **Growth** is a measurable attribute of your child, such as their height and weight (Eduagage, 2021).

2. **Development** is both qualitative and quantitative. It is both, as development can involve ideas such as intelligent quotient (IQ), which can be quantified as a numerical value, but is nonetheless an arbitrary measurement of something qualitative, the cognitive ability (Edugage, 2021).

3. **Child development** refers to the sequence of physical, language, thought and emotional changes that occur in a child from birth to the beginning of adulthood (Buttfield, 2019).

III. Principles of Child Development and Learning (NAEYC, n.d.)

1. All areas of development are important.
2. Learning and development follow sequences.
   - **Cephalocaudal development** refers to growth and development that occurs from the head down. It consists of development starting at the top of the body and working its way down, i.e., from the head to the feet. What this means is that the development of the head and brain tends to be more advanced (in the sense that it occurs first) than the rest of the body. This pattern is largely complete by the beginning of adulthood, though of course other aspects of development continue throughout life (Lena, 2018).
   - **Proximodistal development** occurs from the centre or core of the body in an outward direction. It consists in the tendency for growth to start at the center of the body and work its way outward, toward the extremities. This is called the proximodistal pattern. Thus, the spine develops first in the uterus, followed by the extremities and finally the fingers and toes (Lena, 2018).
4. Development results from maturity and experience.
5. Early experiences have profound effects on development and learning.
6. Development moves to greater independence.
7. Children develop best with secure relationships.
8. Development is influenced by multiple social and cultural backgrounds.
9. Children learn in a variety of ways.
10. Play is important for developing self-regulation and promoting language, cognition, and social competence.
11. Development and learning advance when children are challenged.
12. Children’s experiences shape their motivation and approaches to learning.
IV. The Eight Stages of Human Development (Life Span)

Developmental Period/Stage refers to the time frame in a person’s life that is characterized by certain features

1. Prenatal period (infancy to birth)
2. Infancy (birth to 18-24 months)
3. Early childhood (2-5 years)
4. Middle and late childhood (6-11 years)
5. Adolescence (varying endpoints; from 10-12 to 18-22 years)
6. Early adulthood (late teens to early 30’s)
7. Middle adulthood (40 – 60 years)
8. Late adulthood (60's-70's to death)

V. Havighurst’s Developmental Task

Robert Havighurst emphasized that learning is basic and that it continues throughout life span. Growth and development occurs in six stages (Cruz, n.d.).

Developmental Tasks of Infancy and Early Childhood:
✓ Learning to walk
✓ Learning to take solid foods
✓ Learning to talk
✓ Learning to control the elimination of body wastes
✓ Learning sex differences and sexual modesty
✓ Forming concepts and learning language to describe social and physical reality.
✓ Getting ready to read

Developmental Tasks of Middle Childhood:
✓ Learning physical skills necessary for ordinary games.
✓ Building wholesome attitudes toward oneself as a growing organism
✓ Learning to get along with age-mates
✓ Learning an appropriate masculine or feminine social role
✓ Developing fundamental skills in reading, writing, and calculating
✓ Developing concepts necessary for everyday living
✓ Developing conscience, morality, and a scale of values
✓ Achieving personal independence
✓ Developing attitudes toward social groups and institutions

Developmental Tasks of Adolescence:
✓ Achieving new and more mature relations with age-mates of both sexes
✓ Achieving a masculine or feminine social role
✓ Accepting one’s physique and using the body effectively
✓ Achieving emotional independence of parents and other adults
✓ Preparing for marriage and family life Preparing for an economic career
✓ Acquiring a set of values and an ethical system as a guide to behavior; developing an ideology
✓ Desiring and achieving socially responsible behavior

Developmental Tasks of Early Adulthood
✓ Selecting a mate
✓ Achieving a masculine or feminine social role
✓ Learning to live with a marriage partner
✓ Starting a family
✓ Rearing children
✓ Managing a home
✓ Getting started in an occupation
✓ Taking on civic responsibility
✓ Finding a congenial social group
Developmental Tasks of Middle Age
✓ Achieving adult civic and social responsibility
✓ Establishing and maintaining an economic standard of living
✓ Assisting teenage children to become responsible and happy adults
✓ Developing adult leisure-time activities
✓ Relating oneself to one’s spouse as a person
✓ Accepting and adjusting to the physiological changes or middle age
✓ Adjusting to aging parents.

Developmental Tasks of Later Maturity
✓ Adjusting to decreasing physical strength and health
✓ Adjusting to retirement and reduced income
✓ Adjusting to death of a spouse
✓ Establishing an explicit affiliation with one’s age group
✓ Meeting social and civil obligations
✓ Establishing satisfactory physical living arrangement

VI. Physical and Motor Development.
A. Physical and Motor Development

- Infants need to learn how to move and to use their bodies to perform various tasks, a process better known as motor development. Initially, babies’ movements are simply the uncontrolled, reflexive movements they are born with; over time, they learn to move their body parts voluntarily to perform both gross (large) and fine (small) motor skills. In general, babies begin developing motor skills from head to tail (cephalocaudal), the center of the body outward (proximodistal). They learn to control their head and neck before they learn to maneuver their arms; they learn to maneuver their arms before they learn to manipulate their fingers. Babies learn to move their torso before the learn how to move their arms and legs.

- The sucking reflex allows babies to drink milk and nourish themselves in the days of life.

- Another permanent and life-supporting reflex is heard turning in the first days of life.

- Another permanent life-supporting reflex is head turning. This reflex allows a baby to turn his head if something (a blanket, pillow, or stuffed animal) is blocking his airflow.

- Another reflex that also babies survive is the rooting reflex. When babies root, they may nuzzle their face and mouth into the caregiver’s chest or shoulder.

- The rest of the flexes have less survival value but are still notable. For the first 3 to 4 months, babies have an amazing grasping ability and reflex. They will grasp anything placed in their palm and hold it with amazing strength for their size. Some infants in the first weeks of life can support their entire body weight through that grasp.

- While this reflex may not have any survival function in modern times, it does help babies bond with caregivers and family in the first weeks of life. Similarly, for the first two months, babies will ‘step’ with their legs if they are held vertically with their feet touching a surface. Even though this reflex disappears months before babies begin walking purposely, experts believe stepping helps infants learn how their legs work can be used.

- The Moro response is another reflex that is present during the first 6 months of life, but doesn’t seem to have a purpose in modern life. A baby with arch her back, flail out, and then curl up if she feels as although she is being dropped.
**The final reflex is Tonic Neck.** During the first 4 months, when babies lie awake on their backs with their heads facing to one side, they will extend the arm on the side of their body that they’re facing and reflex the other arm at an angle, in a position that resembles fencing pose. This reflex may help prepare them for voluntary reaching later in their environment.

**Between ages 2 and 3 years,** young children stop “toddling”, or using the awkward, wide-legged robot-like stance that is the hallmark of new walkers. As they develop a smoother gait, they also develop the ability to run, and hop. Children of this age can participate in throwing and catching games with larger balls. They can also push themselves around with their feet while sitting on a riding toy.

**Children who are 3 to 4 years old** can climb up stairs using a method of bringing both feet together on each step before proceeding to the next step (in contrast, adult place one foot on each step in sequence); However, young children may still need some “back up” assistant to prevent falls in case they become unsteady in this new skill. Children of this age will also be stumped when it’s time to go back down the stairs; they tend to turn around and scoot down the stairs backwards. 3 to 4 years old can jump and hop higher as higher as their leg muscles grow stronger. Many can even hop on one foot for a short period of time.

**By ages 4 to 5,** children can go up and down the stairs alone in the adult fashion (i.e. taking one step at a time); their running continues to smooth out and increase in speed. Children of this age can also skip and add spin to their throws. They also have more control when riding their tricycles (or bicycles), and can be drive them faster.

**During ages 5 to 6,** young children continue to refine easier skills. They’re running even faster and can start to ride bicycles with training wheels for added stability. In addition, they can step sideways. Children of this age begin mastering new forms of physical play such as the jungle gym, and begin to use the see-saw, slide, and swing on their own. They often start jumping rope, skating, hitting balls with bats, and so on. Many children of this age enjoy learning to play organized sports as soccer, basketball, t-ball or swimming. In addition, 5 to 6 years old often like to participate in physical extracurricular activities such as karate, gymnastics, or dance. Children continue to refine and improve their gross motor skills through age 7 and beyond.

**B. Brain Development**

- The brain’s ability to change from experience is known as Plasticity. The human brain is especially plastic early in life, which is why the “nurture” part of the equation is so important. Throughout life the brain continues to be plastic—this is the mechanism of learning—but plasticity declines in adulthood. As a child’s brain develops, it goes through several “critical periods,” as developmental phase in which the brain requires certain environmental input of it will not develop normally.

**Early Milestones in Brain Growth**

- **4 months:** the infant’s brain responds to every sound produced in all the languages of the world.
- **8 to 9 months:** Babies can form specific memories from their experiences, such as how to push a ball to make it roll.
- **10 months:** Babies can now distinguish and even produce the sounds of their own language (such as “da-da”) no longer pay attention to the sounds of language that are foreign.
- **12 months:** Babies whose parents say, for example, “Lookee at the doggie” will go to the appropriate picture of a dog in a picture book more often than those babies who are talked to normal, flatter voices.
• **12 to 18 months**: Babies can keep in memory something that has been hidden and find it again, even if it has completely covered up. They can also hold memory sequences of simple activities, such as winding up a jack-in-the-box until the figure pops up.

• **24 months**: Preschool children now clear picture in mind of people who are dear to them, and the get upset when separated from these people (even their peers)

• **30 months**: Preschool children can hold in mind a whole sequence of spatial maps and know where things are in their environment.

• **36 months**: A preschool child can now two different emotions in his mind at the same time, such as being sad that he spilled ice cream on his clothes but glad that he’s at birthday party.

**VII. Factors Affecting Growth and Development (LEPT, 2019):**

- **Genetics/Heredity**
  - Gender
  - Health
  - Intelligence

- **Temperament**
  - Activity levels
  - Adaptability
  - Distractibility
  - Mood quality
  - Attention span

- **Environment**
  - Socio-economic status
  - Parent-child relationship
  - Religion/Culture
  - Early sensory simulation
  - Training and education
  - Media/Technology

- **Nutrition**
  - *Maternal Nutrition* - the nutritional status of the women during adolescent pregnancy and lactation has a direct impact on the child’s health and development.
  - *Child Nutrition* - the Child’s state of nutritional balance is crucial in his early developmental age.

**VIII. Exceptional Development**

*Physical Disabilities* - Persons with physical disabilities may experience functional, visual, orthopedic, motor, or hearing impairments, which may impact upon their ability to walk, play and learn. Physical disabilities are also often defined and categorized by some degree of limitation in the use of upper or lower extremities and maintaining posture and positioning.

*Attention Deficit Disorder (ADD) and Attention Deficit Hyperactive Disorder (ADHD)* - Attention Deficit Hyperactivity Disorder (ADHD) and Hyperkinetic Disorder (as officially known in U.K., though ADHD is more commonly used) is generally considered to be a developmental disorder, largely neurological in nature, affecting about 5% of the world’s population. The disorder typically presents itself during childhood, and is characterized by a present pattern of inattention and/or hyperactivity, as well as forgetfulness, poor impulse control or impulsivity and distractibility. ADHD is currently considered to be a persistent and chronic condition for which no medical cure is available ADHD is most commonly diagnosed in children and, over the past decade.
According to Smith, Robinson, and Segal (2021), children with ADHD may be:
- Inattentive, but not hyperactive or impulsive.
- Hyperactive and impulsive, but able to pay attention.
- Inattentive, hyperactive, and impulsive (the most common form of ADHD).

IX. Linguistic and Literary Development

1. Natural History and Language Development

Language development is a process that starts early in human life, when a person begins to acquire language by learning it as it is spoken and by mimicry. Children’s language development moves from simplicity to complexity. Infants start without language. Yet by four months of age, babies can read lips and discriminate speech sounds.

- Usually, language starts off as recall of simple words without associated meaning, but as children age, words acquire meaning, and connections between words are formed, in time, sentences start to form as words are joined together to create logical meaning. As a person gets older, new meaning and new associations are created and vocabulary increases as more words are learned.

- Infant use their bodies, vocal cries and other preverbal vocalizations to communicate their wants, needs and dispositions. Even though most children begin to vocalize and eventually verbalize at various ages and at different rates, they learn their first language without conscious instruction from parents or caretakers. It is seemingly effortless task that grows increasingly difficult with age. Of course, before any learning can begin, the child must be biologically and socially mature enough.

**Biological Preconditions**—Linguist do not all agree on what biological factors contribute to language development, however most do agree that our ability to acquire such a complicated system is specific to the human species. Furthermore, our ability to learn language may have been developed through the evolutionary process and that the foundation for language may be passed down genetically.

**Second Preconditions**—it is crucial that children are allowed to socially interact with other people who can vocalize and respond to questions. For language acquisition to develop successfully, children must be in an environment that allows them to communicate socially in that language.

There are a few different theories as to why and how children develop language. The most popular explanation is that language is acquired through imitation. However, this proves to be more of a folk tale than anything. Two most accepted theories in language development are psychological and functional. Psychological explanations focus on the mental processes involved in childhood language learning. Functional explanations look at the social process involved in learning the first language.

2. Bilingual Language Development

- There are two major patterns in bilingual language acquisition; simultaneous Bilingualism and Sequential bilingualism. In simultaneous bilingualism, the child acquires two languages at the same time before the age of 3 years. These children may mix words or parts of words from both languages in the first stage. Stage 2 occurs at 4 years and older when distinction between the two languages takes place, and the child uses each language separately. Sequential bilingualism also occurs before the child is 3 years old, but the child can draw in on the knowledge and experience of first language while acquiring the second language.

- Detecting delays in the speech and language of multilingual children presents a challenge. The authors state that “the key is to obtain information about the child’s entire language system, not just the primary or secondary language”. 
The following “red flags” may indicate that the child who is simultaneously acquiring two languages is experiencing problems with language development.

- No sounds by 2-6 months
- Less than one new word per week for 6-15 month-old children.
- Less than 20 words (in the two languages combined by 20 months; and
- No use of word combinations and a very limited vocabulary by age 2-3 years
- Red flags for abnormal language development in the sequential acquisition of two languages include.
- Lack of normal milestones in the first language
- Prolonged phase of not talking
- Difficulty of retrieving words

Factors Affecting Language Development

1. Inadequate stimulation (talking and playing with the child)
2. Delayed general development (global developmental delay), physical development motor skills), cognitive development etc.
3. Specific difficulty with language learning. Not very interested in language, prefers other modalities e.g. physical activities
4. Poor control and/or coordination of the speech muscles; lips, tongue etc.
5. Medical problems
6. Inadequate awareness of communication, lacks “communication intent”
7. Reduced hearing e.g. ear infection, fluid in ear, impacted ear wax etc.
8. Changes in child’s environment e.g. moving
9. Exposure to too many languages for the child
10. Inadequate opportunity for speech e.g. the child everyone talks for, the “babied” child has a more dominant sibling etc.
11. Emotional factors e.g. behavioral problems, anxiety, pressure to perform etc.
12. Short attention span.
13. Family history of speech and language delays or difficulties

3. Exceptional Development

Aphasia (also known as aphmia) - It is a loss of the ability to produce and/or comprehend language due to injury to brain areas specialized for these functions. It is not a result of deficits in sensory, intellect, or psychiatric functioning. Depending on the area and extent of the damage, someone suffering from aphasia may be able to speak but not write, or vice versa, or display any of wide variety of other deficiencies in language comprehension and production, such as being able to sing but not to speak.

Dyslexia - It is a specific learning disability that manifests primarily as a difficulty with written language, particularly with reading and spelling. Dyslexia is the result of neurological differences but is not intellectual disability. Most people with dyslexia have average or above average intelligence.

Evidence suggests that dyslexia results for differences in how the brain processes written and/or verbal language. It is separate and distinct from reading difficulties resulting from other causes, such as deficiencies in intelligence, a non-neurological deficiency with vision or hearing, or from poor or inadequate reading instruction.

4. Cognitive Development

4.1 Theories of Cognitive Development

Jean Piaget-Swiss psychologist (1896-1980). His theory provided many central concepts in the field of developmental psychology and concerned the growth of the intelligence, which for Piaget, meant the ability to more accurately represent the world and perform logical operations on representations of the concepts grounded in the world. The theory concerns the emergence and acquisitions of the schemata-
schemes, of one perceive the world in “developmental stages”, time when children are acquiring new ways of mentally representing-information.

1. **Sensorimotor period (years 0-2)**

   Infants are born with a set of congenital reflexes, according to Piaget, in addition to explore their world. Their initial schemas are formed through differentiation of the congenital reflexes:

   - **The first sub-stage**, known as the reflex schema stage, occurs from birth to six weeks and is associated primarily with the development of reflexes. Three primary reflexes are described by Piaget: sucking of objects in the mouth following moving or interesting objects with the eyes, and closing of the hand when an object makes contact with the palm (palmar grasp). Over this first six weeks of life, these reflexes begin to become voluntary actions; for example, the palmar reflex becomes intentional grasping.

   - **The second sub-stage**, primary circular reaction phase, occurs from six weeks to four months and is associated primarily with the development of habits. Primary circular reactions or repeating of an action involving only one’s body begins. An example of this type of reaction would involve something like an infant repeating the motion of passing their hands before their face. The schema developed during this stage informs the infant about the relationships among his body parts (e.g., in passing the hand in form of his eyes he develops a motor schema for moving his arm so that the hand becomes visible.

   - **The third sub-stage**, the secondary circular reactions phase, occurs from four to nine months and is associated primarily with the development of coordination between vision and apprehension. Three new abilities occur at this stage: intentional grasping for a desired object, secondary circular reactions, and differentiations between ends and means. At this stage, infants will intentionally grasp the air in the direction of a desired object, often to the amusement of friends, family, younger and older siblings, grandparents, etc. Secondary circular reactions, or the repetition of an action involving an external object begins; for example, moving a switch to turn on a light repeatedly. The differentiation between means also occurs. This is perhaps one of the most important stages of a child’s growth as it signifies the drawn for logic. However, babies still only have a very early rudimentary grasp of this and most of their discoveries have an “accidental” quality to them in that the initial performance of what will soon becomes a secondary circular reactions occurs by chance; but the operant conditioning causes the initial “accidental” behavior (which was followed by an “interesting pattern of stimulation) to be repeated. And the ability to repeat the act is the result of primary circular reactions established in the previous stage. For example, when the infant’s hand accidentally makes contact with an object in his field of vision is based on the primary circular reaction bringing his hand into his field of vision. Thus, the child learns (at the level of schemata) that “if he can see it then he can also touch it” and this results in a schemata which is the knowledge that is external environment is populated with solid objects.

   - **The fourth sub-stage**, called the coordination of secondary circular reactions stage, which occurs from nine to twelve months, is when Piaget thought that object permanence developed. In addition, the stage is called the coordination of secondary circular reactions stage, and is primarily with the development of logic and the coordination between means and ends, this is extremely important marks the beginning of goal orientation or intentionally, the deliberate planning of steps to meet an objective.

   - **The fifth sub-stage**, tertiary circular reactions phase, occurs from twelve to eighteen months and is associated primarily with the discovery of new means to meet goals. Piaget describes the child at this juncture as the “young scientist”, conducting pseudo-experiments to discover new methods of meeting challenges.
The six sub-stage, considered “beginning of symbolic representation”, is associated primarily with the beginnings of insight, or true creativity. In this stage the trial- and error application of schemata, which was observable during the previous stage, occurs internally (at the level of schemata rather than of motor responses), resulting in the sudden appearance of new effective behaviors (without any observable trial-and-error). This is also the time when symbols (words and images) begin to stand for other objects. This marks the passage into the preoperational stage.

2. **Preoperational period (years 2-7)**

The Preoperational stage is the second of four stages of cognitive development. By observing sequence of play, Piaget was able to demonstrate that towards the end of the second year a qualitatively new kind of psychological functioning occurs (Pre) Operatory Thought in Piagetian theory is any procedure for mentally acting on objects. The hallmark of the preoperational stage is spare and logically inadequate mental operations.

According to Piaget, the Pre Operational stage of development follows the sensorimotor stage and occurs between 2-7 years of age. It includes the following processes.

2.1 **Symbolic functioning**- characterized by the use of mental symbols, words, or pictures, which the child uses to represent something which is not physically present

2.2 **Centration**-characterized by a child focusing or attending to only one aspect of a stimulus or situation. For example, in pouring a quantity of liquid from an narrow beaker into a shallow dish, a preschool child might judge the quantity of liquid to have decreased, because it is “lower”- that is, the child attends to the height of the water, but not the compensating increase in the diameter of the container.

2.3 **Intuitive thought**- occurs when the child is able to believe in something without knowing why she or he believes it.

2.4 **Egocentrism**- a version of centration, this denotes a tendency of a child to only think for her or his own point of view. Also, the inability of a child to take the point of view of others. Example, if a child is in trouble, he or she might cover her eyes thinking if I cannot see myself my mom cannot either.

2.5 **Inability to conserve**-though Piaget’s conservation experiments (conservation of mass, volume and number after the original for m has been changed. For example, a child in this phase will believe that a string which has up in “o-o-o-o” pattern will have a larger number of beads than a string which has a oooo: pattern, because the latter pattern has less space between Os; or that a tall, thin 8-ounce cup has more liquid in it than a wide, short 8-ounce cup.

2.6 **Animism**- The child believes that inanimate objects have: lifelike” qualities and are capable of action. Example, a child plays with a doll and treats it likes a real person. In a way this like using their imagination.

*Piaget has identified four stages of animism* (McLeod, 2018):

1. Up to the ages 4 or 5 years, the child believes that almost everything is alive and has a purpose.
2. During the second stage (5-7 years) only objects that move have a purpose.
3. In the next stage (7-9 years), only objects that move spontaneously are thought to be alive.
4. In the last stage (9-12 years), the child understands that only plants and animals are alive.

3. **Concrete operational period (years 7-11)**
The Concrete operational stage is the third of four stages of cognitive development in Piaget’s theory. This stage, which follows the Preoperational stage, occurs between the ages 7 and 11 years and is characterized by the appropriate use of logic. Important processes during this stage are:

3.1 **Seriation** - the ability to arrange objects in an order according to size, shape, or any other characteristic. For example, if given different-shaded objects they may make a colour gradient.

3.2 **Classification** - the ability to name and identify sets of objects according to appearance, size or other characteristic, including the idea that one set of objects can include another, a child is no longer subject to the illogical limitations of animism (the belief that all objects are alive and therefore have feelings).

3.3 **Decentering** - where the child takes into account multiple aspects of a problem to solve it. For example, the child will no longer perceive an exceptionally wide but short cup to contain less than a normally-wide, taller cup.

3.4 **Reversibility** - where the child understands that numbers or objects can be changed, then returned to their original state. For this reason, a child will be able to rapidly determine that if 4 + 4 equals 8, 8/4 will equal 4, the original quantity.

3.5 **Conservation** - understanding that quantity, length or number of items is unrelated to the arrangement or appearance of the object or items. For instance, when a child is presented with two equally-sized, full cup they will be able to discern that if water is transferred to a pitcher it will conserve the quantity and be equal to the other filled up.

3.6 **Elimination of Egocentrism** - the ability to view things from another’s perspective (even if they think incorrectly). For instance, show a child a comic in whom Jane puts a doll under the box leaves the room, and then Sarah moves the doll to a drawer, and Jane comes back. A child in the concrete operation stage will stay that Jane will still think it’s under the box even through the child knows it is in the drawer.

4. **Formal operational period (years 11-adulthood)**

The formal operational period is the fourth and final of the periods of cognitive development in the Piaget’s theory. This stage, which follows the Concrete Operational stage, commences at around 11 years of age (puberty) and continues into adulthood. It is characterized by acquisition of the ability to think abstractly, reason logically and draw conclusions from the information available. During this stage the young adult is able to understand such things as love “shades of gray”, logical proofs, and values.

Piaget stated that “hypothetico-deductive reasoning” becomes important during the formal operational stage. This type of thinking involves hypothetical “what-if” situations that are not always rooted in reality, i.e. *counterfactual thinking*. It is often required in science and mathematics (Monroe & Amidon, n.d.).

- **Abstract thought** emerges during the formal operational stage. Children tend to think very concretely and specifically in earlier stages, and begin to consider possible outcomes and consequences of actions.
- **Metacognition**, the capacity for “thinking about thinking” that allows adolescents and adults to reason about their thought processes and monitors them.
- **Problem-solving** is demonstrated when children use trial-and-error to solve problems. The ability to systematically solve a problem in a logical and methodical way emerges.

*Lev Vygotsky* - Psychologist was born in 1896 in Orsha, Belarus (then a part of the Russian Empire). Vygotsky was tutored privately by Solomon Asphiz and graduated from Moscow State University in
11. Later, he attended the Institute of Psychology in Moscow (1924-34), where he worked extensively on ideas about cognitive development, particularly the relationship between language and thinking. His writings emphasized the roles of historical, cultural and social factors in cognition and argued that language was the most important symbolic tool provided by society.

Perhaps Vygotsky’s most important contribution concerns the inter-relationship of language development and thought. This concept, explored in Vygotsky’s book “Thinking and Speaking”, establishes the explicit and profound connection between speech (both silent inner speech and oral language), and the development of mental concepts and cognitive awareness. It should be noted that Vygotsky described inner speech as being qualitatively different than normal (external) speech. For Vygotsky, social interaction is important for learning; e.g. children learn adults and other children.

Vygotsky also created the concept of the zone of proximal development, often abbreviated as ZPD, which came to be a central part of his theory. Language is the way that a child communicates with others after they are born and they continue to learn by interacting with those around them. Building on his idea of social interaction as the basis for learning, he mentioned the value of a mentor or teacher in the life of a student.

Source: Kurt (2020)

To assist a person to move through the zone of proximal development, educators are encouraged to focus on three important components which aid the learning process:

- The presence of someone with knowledge and skills beyond that of the learner (a more knowledgeable other).
- Social interactions with a skillful tutor that allow the learner to observe and practice their skills.
- Scaffolding, or supportive activities provided by the educator, or more competent peer, to support the student as he or she is led through the ZPD.

More Knowledgeable Other

The more knowledgeable other (MKO) refers to someone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept (McLeod, 2019).

Information Processing Theory

Information Processing Theory is a cognitive theory that focuses on how information is encoded into our memory. The theory describes how our brains filter information, from what we’re paying attention to in
the present moment, to what gets stored in our short-term or working memory and ultimately into our long-term memory. It was developed by American psychologists including George Miller in the 1950s (Lawless, 2019).

There are three primary stages in IP Theory:
- **Encoding** - information is sensed, perceived, and attended.
- **Storage** - the information is stored for either a brief or extended period of time depending upon the processes following encoding.
- **Retrieval** - the information is found at the appropriate time, and reactivated for use on a current task, the true test of effective memory.

The initial appeal of information processing theories was the idea that cognitive processes could be described in a stage-like model. The stages to processing follow a path along which information is taken into the memory system, and reactivated when necessary. Most theories of information processing center around three main stages in the memory process.

**Sensory Register**

The first step in the IP model, hold ALL sensory information for a VERY BRIEF time period.
- Capacity: we hold an enormous amount, more that we can ever perceive.
- Duration: Extremely brief - in order of 1 to 3 seconds

**The Role of Attention**

- To move information into consciousness, we need to attend to it. That is, we only have the ability to perceive and remember later those things that pass through the attention gate.

**Short Term Memory (Working Memory)**

- Capacity: What you can say about in 2 seconds. Often said to be 7+/ 2 items.
- Duration: Around 18 seconds or less
- To reduce the loss of information in 18 seconds, you need to rehearse
- There are two types of rehearsal: Maintenance and Elaborative

**Long Term Memory**

The final storing house of memorial information, the long term memory store holds information until needed again.
- Capacity: unlimited?
- Duration: indefinite?

**Executive Control Processes**

- Also known as executive processor, or Metacognitive skills
- Guide the flow of information through the system, helps the learner make informed
- Example processes - attention, rehearsals, organization, Sometimes call METACOGNITIVE SKILLS

**Forgetting** - the inability to access information when needed

- There are two main ways in which forgetting likely occurs:
- Decay - Information is not attended to, and eventually fades away. Very prevalent in working memory.
- Inference - New or old information blocks’ access to the information in question.
Methods for Increasing the Probability of Remembering

- Organization - info that is organized efficiently should be recalled
- Deep processing - This is focusing upon meaning.
- Elaboration - Connecting new info with old, to gain meaning.
- Generation - Things we produce are easier to remember than things we hear.
- Context - Remembering the situation helps recover information
- Personalization - making the information relevant to the individual

Memory Methods
- Memorization ( note the same as learning)
- Serial Position Effect (recency and primacy) you will remember the beginning and end of list most readily
- Part Learning - Break up the list to increase memorization
- Distributed Practice - Break up learning sessions, rather than cramming all the info in at once (Massed Practice)
- Mnemonics Aids
- Loci Method - Familiar place, associate list with items in place (i.e. living room)
- Peg-type Standard list is a cue to the target list.
- Acronym - SCUBA
- Chain Mnemonics - EGBDF
- Key word Method - Association of new word/ concept with well knows word/concept that sounds similar.

Theories of Intelligence

1. Psychometric Theories

Psychometric theories have sought to understand the structure of intelligence; the from it takes, it categories, and its composition. Underlying psychometric intelligence theory is a psychological model according to which intelligence is a combination of abilities that can be measured by mental testing. These tests often include analogies, classification / identification, and series completion. Each test score is equally weighted according to the evidence of underlying ability in each category.

British psychologist Charles E. Spearman published the first psychometric theory 1904. His theory noted that people who excelled on one mental ability test often did well on the others, and people who did poorly on one of them tended to do poorly with others. Using this concept, Spearman devised a technique of statistical analyzing that examined patterns of individual scores. This analysis helped him discover what he believed to be the two sources of these individual differences: the “general factor” which is our general intellectual ability, and a test-specific factor.

American psychologist L.L. Thurstone disregarded with Spearman’s theory and his isolation of the “general factor” of intelligence. Thurstone believed that the “general factor” resulted from Spearman’s method of analysis, and that if analysis were more thorough, seven factors would emerge. These seven factors were collectively called the “primary mental abilities” and included verbal comprehension, verbal comprehension, verbal fluency, numbers, spatial visualization, inductive reasoning, memory, memory and perceptual speed.

Most psychologists agree that a broader subdivision of abilities than Spearman’s classification is necessary, but only some agree with hierarchal subdivision. It quickly became apparent to many psychologists that were problems that could not be addressed by psychometric theories. The number of abilities could not be positively identified, and the differences between them could not be clearly defined due to the limitations of testing and analysis. However, the most significant problem extended beyond the number of abilities: what happens in someone’s mind when they are using the ability in question? Psychometric theories had no means of addressing this issue, and cognitive theories began to fill this gap.
2. **Cognitive Theories**

During the era of psychometric theories, people’s test scores dominated the study of intelligence. In 1957, American psychologist Lee Cronbach criticized how some psychologists study individual differences and other study commonalities in human behavior, but the two methods never meet. Cronbach voiced the need for two methods to be united, which led to the development of cognitive theories of intelligence.

Without understanding the processes underlying intelligence, we cannot come to accurate conclusions when analyzing tests scores or assessing someone’s performance. Cognitive analysis helps the interpretation of the test scores by determining to what degree the score reflects reasoning ability and the degree to which it is a result of not understanding the questions or vocabulary. Psychometric theories did not differentiate between these two factors, which have a significant effect on the determination of intelligence. Many people are excellent reasoners but have modest vocabularies, and vice versa.

Underlying the cognitive approach to intelligence is the assumption that intelligence is comprised of a set of mental representations of information, and a set of processes that operate the mental representations. It is assumed that a more intelligent person represents information better, and operates more quickly on these representations than does a less intelligent person.

Several different cognitive theories of intelligence have emerged over the years. One was introduced by Earl Hunt, Nancy Frost, and Clifford Lunneborg, who in 1973 showed one way on which psychometric and cognitive modeling could be combined. Instead of using conventional psychometric tests, they used tasks that allowed them to study the basis of cognition—perception, learning, and memory. Individual differences in the tasks became apparent, which they related to differing patterns of performing and operating manual representations.

Several years later, Robert Stemberg suggested an alternative approach to studying cognitive process. He argued, based on evidence he had gathered, that there was only a weak relationship between basic cognitive tasks and psychometric test scores because the tasks being used were too simple. Although simple tasks involve cognitive processes, they are peripheral rather than central.

Although opposing cognitive theories exist, they are all based on the serial processing of information, which means that cognitive processes are executed one after another in a series.

The assumption is that we process chunks of information one at a time, trying to combine the processes into an overall problem-solving strategy. Other psychologists have challenged this idea, arguing that cognitive processing is parallel, meaning that we process large amounts of information simultaneously. However, it has proved difficult to distinguish between serial and parallel models of information processing.

Despite evidence and support of cognitive intelligence theories, a major problem remains regarding the nature of intelligence. Cognitive theories do not take into account that the description of intelligence may differ from one cultural group to another. Even within mainstream cultures, it will be known that conventional tests do not reliably predict performance. Therefore in addition to cognition, the context in which the cognition operates also needs to be accounted for.

**Exceptional Development (Cognitive Development)**

**Giftedness**—For many years, psychometricians and psychologists, following the footsteps of Lewis Terman in 1916, equated giftedness with high IQ. This “legacy” survives to the present day, in that giftedness and high IQ continue to be equated in some conceptions of giftedness. Since that early time, however, other researchers (e.g., Cattell, Guilford, and Thurstone) have argued that intellect cannot be expressed in such a unitary manner, and have suggested more multifaceted approaches to intelligence. Research conducted in the 1980s has provided data which support notions of multiple components to intelligence. This is particularly evident in the examination of “giftedness” by Stenberg and Davidson in their edited Conceptions of Giftedness. The many different conceptions of giftedness presented, although distinct, are interrelated in several ways. Most of the investigators define giftedness in terms of multiple qualities, not all of which are intellectual; IQ scores are often viewed as adequate measures of giftedness. Motivation, high self concept, and creativity are they key qualities in many of these broadened conceptions of giftedness.
**Intellectual Disability (formerly Mental Retardation)** is a term for a pattern of persistently slow learning of basic motor and language skills ("milestones") during childhood, and a significantly below-normal global intellectual capacity as an adult. One common criterion for diagnosis of mental retardation is tested intelligence quotient (IQ) of 70 or below and deficits in adaptive functioning.

People with intellectual disability may be described as having developmental disabilities, global development delay or learning qualities.

**Autism** is a brain development disorder characterized by impairments in social interaction and communication, and restricted and repetitive behavior, all exhibited before a child is three years old. These characteristics distinguish autism from milder spectrum disorder (ASD).

Autism affects many parts of the brain, how this occurs is poorly understood. Parents usually notice signs in the first year or two of their child’s life, Early intervention may help children gain self-care and social skills, although few of these interventions are supported by scientific studies. There is no cure, with severe autism, independent living is unlikely; with milder autism, there are some success stories for adults, and an autistic culture has developed, with some seeking a cure and others believing that autism is a condition rather than a disorder.

**Asperger’s Syndrome** (also Asperger’s Syndrome, Asperger’s disorder, Asperger’s AS, or AD) is one of several autism spectrum disorders (ASD) characterized by difficulties in social interaction and by restricted and stereotyped interests and activities. AS is distinguished for other ASDs in having no general delay in language or cognitive development.

There is no single treatment for AS, and the effectiveness of particular interventions is supported by only limited data. Intervention is aimed at improving symptoms and function. The mainstay of treatment is behavioral therapy, focusing on specific deficits to address poor communication skills, obsessive or repetitive routines, and clumsiness. Most individuals with AS can learn to cope with their differences, but may continue to need moral support encouragement to maintain an independent life. Adults with AS have reached the highest levels of achievement in fields such as mathematics, physics and computer science. Researchers and people with AS have contributed to a shift in attitudes away from the notion that AS is a difference rather than a disability.

**Down syndrome** - Down syndrome or Trisonomy 21 (usual Down's syndrome in British English) is a specific disorder caused by the presence of all or part if an extra 21st chromosome. It is named after John Longdon Down, the British doctor who described it in 1866. The condition is characterized by a combination of major and minor differences in structure. Often Down syndrome is associated with some impairment of cognitive ability and physical growth as well as facial appearance. Down syndrome can be identifies during pregnancy or at birth. Individuals with Down syndrome can have a lower than average cognitive ability, often ranging from mild to moderate learning disabilities. Developmental disabilities often manifests as tendency toward concrete thinking or naivété. A small number have severe to profound mental disability. The incidence of Down syndrome is estimated at 1 per 800 to 1, 000 births.

**Social and Emotional Development**

**Theories of Socio-Emotional Development**

*Erik Homburger Erikson* (1902-1994) was a German developmental psychologist and psychoanalyst known for his theory of social development of human beings, and for coining the phrase identity crisis.

- Each of Erikson’s stages of psychosocial development are marked by a conflict, for which successful resolution will result in a favorable outcome, for example, trust vs. mistrust, and by an important event that is conflict resolves itself around, for example, meaning of one’s life.

- Favorable outcomes of each stage are sometimes known as “virtues”, a term used, in the context of Erikson work, as it is applied to medicines, meaning “potencies” For example, the virtue that would emerge from successful resolution. Oddly, and certainly counter-intuitively, Erikson’s research
reveals with breath-taking clarity how each individual must learn how to hold both extremes of each specific life-stage challenge in tension with one another not rejecting one end of the tension or the other.

- Only when both extremes in a life-stage challenge are understood and accepted as both required and useful, can the optimal virtue for that stage surface. Thus, “trust” and “mistrust” must both the understood and accepted, in order for realistic “hope” to emerge as a viable solution at the first stage. Similarly, “integrity” and “despair” must both be understood and embraced, in order for actionable wisdom to emerge as a viable solution at the last stage.

The Erikson life-stage virtues, in order of the stages in which they may be acquired are summarized in the following table below:

<table>
<thead>
<tr>
<th>Psychosocial Stages</th>
<th>Age</th>
<th>Conflict</th>
<th>Important Events</th>
<th>Outcome</th>
<th>Maladaptation</th>
<th>Malignancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infancy (birth to 18 months)</td>
<td>Trust vs. Mistrust</td>
<td>Feeding</td>
<td>Hope</td>
<td>Sensory maladjustment</td>
<td>Withdrawal</td>
<td></td>
</tr>
<tr>
<td>Early Childhood (2 to 3 years)</td>
<td>Autonomy vs. Shame and Doubt</td>
<td>Toilet Training</td>
<td>Will</td>
<td>Impulsiveness</td>
<td>Compulsiveness</td>
<td></td>
</tr>
<tr>
<td>Preschool (3 to 5 years)</td>
<td>Initiative vs. Guilt</td>
<td>Exploration</td>
<td>Purpose</td>
<td>Ruthlessness</td>
<td>Inhibition</td>
<td></td>
</tr>
<tr>
<td>School Age (6 to 11 years)</td>
<td>Industry vs. Inferiority</td>
<td>School</td>
<td>Confidence</td>
<td>Narrow Virtuosity</td>
<td>Inertia</td>
<td></td>
</tr>
<tr>
<td>Adolescence (12 to 18 years)</td>
<td>Identity vs. Role Confusion</td>
<td>Social Relationships</td>
<td>Fidelity</td>
<td>Fanaticism</td>
<td>Repudiation</td>
<td></td>
</tr>
<tr>
<td>Young Adulthood (19 to 40 years)</td>
<td>Intimacy vs. Isolation</td>
<td>Relationships</td>
<td>Love</td>
<td>Promiscuity</td>
<td>Exclusion</td>
<td></td>
</tr>
<tr>
<td>Middle Adulthood (40 to 65 years)</td>
<td>Generativity vs. Stagnation</td>
<td>Work and Parenthood</td>
<td>Care</td>
<td>Overextension</td>
<td>Rejectivity</td>
<td></td>
</tr>
<tr>
<td>Maturity (65 to death)</td>
<td>Ego Integrity vs. Despair</td>
<td>Reflection on Life</td>
<td>Wisdom</td>
<td>Presumption</td>
<td>Disdain</td>
<td></td>
</tr>
</tbody>
</table>

Source: Cherry (2020) and Corpuz, et.al. (2010)

Albert Bandura (Social Cognitive Theory)

- Bandura bases his theory on the acquisition of complex behaviors on a triangular diagram illustrating the interactive effect of various factors. These three factors are behavior (B), the environment (E), and the internal events that influence perceptions and actions (P), the relationship between these three factors is known as reciprocal determinism.

- Bandura identified three types of reinforcers of behavior. These were direct reinforcement, vicarious reinforcement and self reinforcement. Direct reinforcement would be directly experienced by the learner. Vicarious reinforcement would be observed to be consequences of the behavior of the model. Self reinforcement would be feelings of satisfaction or displeasure for behavior gauged by personal performance standards.

- Bandura describes three types of modeling stimuli, which are live models, symbolic models, and verbal descriptions or instructions. Of these three, in American society, the greatest range of exposure is in the form of symbolic models through mass media.

- In Bandura’s later work he introduces two other aspects to his Social Learning Theory. These are his work on the self regulatory system and self efficacy. In the area of self regulatory system/ self evaluative behaviors he said that this systems based upon cognitive sub-processes that:
  - Perceive
  - Evaluate
  - Regulate behavior
Social Cognitive Theory- utilized both in Psychology and Communications posits that portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences.

An important point in the social cognitive theory is that the learner’s behavior is guided by cognitive processes rather than formed or shaped by reinforced practice. Four component parts are responsible for the learning and performance acquisition. These are:

1. **Attention**
   - Observer characteristics
     - perceptual/cognitive capacities
     - arousal level
     - past performance
   - Event characteristics
     - relevance
     - affective valence
     - complexity
     - functional value
     - model’s characteristics
     - Intrinsic rewards

2. **Retention**
   - Observer characteristics
     - cognitive skills
   - Event characteristics
     - cognitive organization
     - cognitive rehearsal

3. **Motor reproduction**
   - Observer characteristics
     - physical capabilities
     - sub-skill mastery
   - Event characteristics
     - selection & organization of responses
     - feedback

4. **Motivation**
   - Observer characteristics
     - incentive preference
     - social bias
     - internal standards
   - Event characteristics
     - external reinforcement
     - self-reinforcement
     - vivacious reinforcement
Emotional Intelligence (EI), often measured as an Emotional Intelligence Quotient (EQ), describes an ability, capacity, or skill to perceive, assess, and manage the emotions of one’s self, of others, and of groups. As relatively new area of psychological research, the definition of EI is constantly changing.

The Emotional Competencies (Goleman) Model

The EI model introduced by Daniel Goleman focuses in EI as wide array of competencies and skills that drive managerial performance, measured by multi-rater assessment and self-assessment (Bradberry and Greaves, 2005). In working with Emotional Intelligence (1998) Goleman explored the function of EI on the job, and claimed EI to be the largest single predictor of success in the workplace, with more recent confirmation of these findings on a worldwide sample seen in Bradberry and Greaves, “The Emotional Intelligence Quick Book” (200%).

Goleman’s model outlines four main EI constructs:

Self-awareness- It is the ability to read one’s emotions and recognize their impact while using gut feelings to guide decisions.

Self-management- It involves controlling one’s emotions and impulses and adapting to changing circumstances.

Social awareness- It is the ability to sense, understand, and react to other’s emotions while comprehending social networks.

Relationships management- It is the ability to inspire, influence, and develop others while managing conflict. Goleman includes a set of emotional competencies within each construct of EI. Emotional competencies are not innate talents, but rather learned capabilities that must be worked on and developed to achieve outstanding performance. Goleman posits that individuals are born with a general emotional intelligence that determines their potential for learning emotional competencies.

Moral Developmental Theories

Kohlberg’s stages of moral development are places of moral adequacy conceived by Lawrence Kohlberg to explain the development of moral reasoning. Created while studying psychology at the University of Chicago, the theory was inspired by the work if Jean Piaget and a fascination with children’s reactions to moral dilemmas. He wrote his doctoral dissertation at the university in 1958, outlining what are now know as his stages of moral development.

Level 1 (Pre-Conventional)
1. Obedience and punishment orientation
2. Self-interest orientation
   (What’s in it for me?)

Level 2 (Conventional)
3. Interpersonal accord and conformity
   (The good boy/good girl attitude)
4. Authority and social-order maintaining orientation
   (Law and order morality)

Level 3 (Post-Conventional)
5. Social contract orientation
6. Universal ethical principles
   (Principled conscience)

Carol Gilligan- her fame rests primarily on in a Different Voice: Psychological Theory and Women’s Development (1982) in which she criticized Kohlberg’s research on the moral development of used children. This at the time showed that girls on average reached a lower level of moral development than boys did. Gilligan
pointed out that the participants in Kohlberg’s basic study were largely male, and that the scoring method Kohlberg used tended to favor a principled way of reasoning that was more common to boys, over a moral argumentation concentrating on relations, which would be more amenable to girls. Kohlberg saw reason to revise his scoring method as a result of Gilligan’s critique, after which boys and girls scored evenly. Her work formed the basis for what has become known as the ethics of care, a theory of ethics that contrasts ethics of care to so-called ethics of justice.

**Levels of Moral Development** (Engineering ethics-Gilligan’s theory, 2019)

**Pre-conventional Level**
- A person in this stage cares for oneself to ensure survival.
- Though the person’s attitude is selfish, this is the transition phase, where the person finds the connection between oneself and others.

**Conventional Level**
- In this stage, the person feels responsible and shows care towards other people.
- Carol Gilligan believes that this moral thinking can be identified in the role of a mother and a wife. This sometimes leads to the ignorance of the self.

**Post-conventional Level**
- This is the stage, where the principle of care for self as well as others, is accepted.
- However, a section of people may never reach this level.

**Levels of Thinking**

Carol Gilligan states that the post-conventional level of moral thinking can be dealt based on the *two types of thinking*. Gilligan’s theory is based on the two main ideas, the *care-based morality* (usually found in women) and the *justice-based morality* (usually found in men).

**Piaget’s Theory of Moral Development**

Piaget conceptualizes moral development as a constructivist process, whereby the interplay of action and thought builds moral concepts. He was principally interested not in what children do (i.e., in whether they break rules or not) but in what they think. In other words he was interested in children’s moral reasoning.

Piaget found that children’s ideas regarding rules, moral judgments and punishment tended to change as they got older. In other words just as there were stages to children’s cognitive development so there were also universal stages to their moral development. He suggested two main types of moral thinking (McLeod, 1970):

1. **Heteronomous morality (moral realism)- 5 to 9 years**
   - The stage in Piaget’s theory of moral development in which children believe rules to be immutable and that they will thus be punished automatically for breaking them (EDUPEDIA, 2018).

2. **Autonomous morality (moral relativism)- 9 to 10 years**
   - The stage in Piaget’s theory of moral development in which an individual comes to understand that rules are changeable as people create them, and thus they will not be punished necessarily for breaking them (EDUPEDIA, 2018).

**Factors Affecting Social and Emotional Development**

The following are some major factors affecting the social and emotional development of children and adolescents:
- Media
- Parenting
- Role Models
- Peer groups
Exceptional Development in the Area of Social Development

Leadership- the ability of an individual to influence, motivate and enable others to contribute toward the effectiveness and success of the organizations of which they are members.

Juvenile Delinquency- Juvenile delinquency may refer to either violent or non-violent crime committed by persons who are (usually) under the age of eighteen and are still considered to be a minor. There is much debate about whether or not such a child should be held criminally responsible for his or her own actions. There are many different inside influences that are believed to affect the way a child acts both negatively and positively, some of which are as follows:

- Abandonment
- Social institutions
- Peer pressure

Affective and Mode Disorders- The mood or affective disorders are mental disorders that primarily affect mood and interfere with the activities of daily living. Usually it includes major depressive disorder (MDD) and bipolar disorder (also called Manic Depressive Psychosis).

Psychosexual Theory

Sigmund Freud believed that personality develops during early childhood: Childhood experiences shape our personalities as well as our behavior as adults. He asserted that we develop via a series of stages during childhood. Each of us must pass through these childhood stages, and if we do not have the proper nurturing and parenting during a stage, we will be stuck, or fixated, in that stage, even as adults (Spielman, Dumper, Jenkins, Lacome, Lovett, & Perlmutter, 2014).

Each of the five stages of Freudian psychosexual development theory is associated with a corresponding age range, erogenous body part, and clinical consequence of fixation (Lantz & Ray, 2021).

Stage I (Oral stage): 0-1 year, oral, mouth: Oral desire is the center of pleasure for the newborn baby. The earliest attachment of a baby is to the one that provides gratification to his oral needs, usually his mother. If the optimal amount of stimulation is not available, libidinal energy fixates on the oral mode of gratification, resulting in subsequent latent aggressive or passive tendencies.

Stage II (Anal Stage): 1-3 years old, anal, bowel, and bladder: Toilet training is an especially sensitive task during this period. The parents' desire for adequate performance shifts the libidinal energy from the oral to the anal area. The child faces increased chances to be reprimanded, to feel inadequate, and an increased ability to perceive a negative evaluation from a caretaker if he fails to perform appropriately. Fixation at this stage can manifest in anal retentiveness (incessant orderliness) or anal expulsiveness (whimsical disorganization).

Stage III (Phallic Stage): 3-6 years old, phallic, genitalia: This is perhaps the most controversial stage of Freud's psychosexual development. This is the stage in which the child begins to experience pleasure associated with their genitalia. In this period of primitive sexual development, the child can establish the roots of fixation with the opposite sex parent, the Oedipus complex.

Stage IV (Latency Stage): 6 - 12 years old, latency, dormant sexual feelings: During this time, the libido is relatively repressed or sublimated. Freud did not identify any erogenous zone for this stage. The child now begins to act on their impulses indirectly by focusing on activities such as school, sports, and building relationships. Dysfunction at this stage results in the child's inability to form healthy relationships as an adult.

Stage V (Genital Stage): 13-18 years old, genital, mature sexual feelings: The child's ego becomes fully developed during this stage, and they are subsequently seeking their independence. Their ability to create meaningful and lasting relationships is concrete, and their sexual desires and activity are healthy and consensual. If a child or young adult experiences dysfunction during this period, they will be unable to develop meaningful healthy relationships.
To elucidate Freud's developmental theories one must address his structural theory of mind. The latter recommends that the psyche (personality) includes three psychic structures: the id, ego, and superego.

- The *id* is the instinctual aspect of the psyche, consisting of the sexual and aggressive drives. It is irrational by nature.
- The *ego* is the decision-making aspect of personality. It is rational by nature.
- The *superego* incorporates the morals and values of society.

**Ecological Systems Theory** (The Psychology Notes Headquarters, 2021)

American psychologist, Urie Bronfenbrenner, formulated the *Ecological Systems Theory* to explain how the inherent qualities of children and their environments interact to influence how they grow and develop.

Bronfenbrenner’s Ecological Systems Theory emphasizes the importance of studying children in multiple environments, also known as ecological systems, in the attempt to understand their development.

Bronfenbrenner’s ecological model organizes contexts of development into five levels of external influence. These levels are categorized from the most intimate level to the broadest.

1. *Microsystem* is the smallest and most immediate environment in which children live. As such, the microsystem comprises the daily home, school or daycare, peer group and community environment of the children.

2. *Mesosystem* encompasses the interaction of the different microsystems which children find themselves in. It is, in essence, a system of microsystems and as such, involves linkages between home and school, between peer group and family, and between family and community.

3. *Exosystem* pertains to the linkages that may exist between two or more settings, one of which may not contain the developing children but affect them indirectly nonetheless.

4. *Macrosystem* is the largest and most distant collection of people and places to the children that still have significant influences on them. This ecological system is composed of the children’s cultural patterns and values, specifically their dominant beliefs and ideas, as well as political and economic systems.

5. *Chronosystem* adds the useful dimension of time to the ecological systems theory. It demonstrates the influence of both change and constancy in the children’s environments. The chronosystem may include a change in family structure, address, parents’ employment status, as well as immense society changes such as economic cycles and wars.
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