

TET 103: CHILD DEVELOPMENT (0–3 YEARS)

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Cognitive Development Theory of Piaget

- Piaget's theory of cognitive development is a comprehensive theory about the nature and development of human intelligence
- It was first created by the Swiss developmental psychologist Jean Piaget
- The theory deals with the nature of knowledge itself and how humans gradually come to acquire, construct, and use it.

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Lecture 10: Development Milestones of the Infant

Lecture objectives

- At the end of this lecture the learner should be able to:
 1. Discuss the cognitive development stages of a child 0 – 3 years
 2. Describe the theories that explain cognitive development of a child 0 – 3 years
 3. Discuss the language acquisition process of a child 0 -3 years
 4. Describe the theories that explain language acquisition process of a child 0 – 3 years
 5. Explain the motor/physical development of a child 0 – 3 years
 6. Explain the emotional/social development of a child 0 -3 years.

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Cognitive Development Theory of Piaget

- Piaget is the major cognitive developmental theorist and his interest was how children learn, what they learn and how they use what they have learnt
- According to Piaget (1968), children move through four stages of intellectual development between infancy and adolescence
- Piaget viewed the course of intellectual growth in terms of:
 - i. Progressive changes in cognitive structures
 - ii. All children must pass through the stages in the same order

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Intellectual Development of Infants

- Cognition refers to the mental activities involved in the acquisition of knowledge, processing, organizing and using it
- The major concerns of cognitive processes are:
 - a) Changes in cognitive functioning which occur as children grow
 - b) The factors that account for these changes.
- Cognitive Development therefore refers to changes in the cognitive structure and functioning that may take place over time.

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Cognitive Development Theory of Piaget

- iii. The attainments in earlier stages is essential for those in later stages
- iv. That all children do not go through the stages at the same age, but the ages given are approximations averages

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Piaget's Stages of Cognitive Development

- Piaget's four stages of intellectual (or cognitive) development are:
 1. Sensorimotor - Birth through ages 18-24 months.
 2. Preoperational - Toddlerhood (18-24 months) through early childhood (age 7)
 3. Concrete operational - Ages 7 to 12.
 4. Formal operational – Adolescence through adulthood

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Piaget's Stages of Cognitive Development

- Piaget believed that developing object permanence or object constancy, the understanding that objects continue to exist even when they cannot be seen, was an important element at this point of development
- By learning that objects are separate and distinct entities and that they have an existence of their own outside of individual perception, children are then able to begin to attach names and words to objects.

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Piaget's Stages of Cognitive Development

1. The Sensorimotor Stage - Ages: Birth to 2 Years

- During this earliest stage of cognitive development, infants and toddlers acquire knowledge through sensory experiences and manipulating objects
- A child's entire experience at the earliest period of this stage occurs through basic reflexes, senses, and motor responses. It is during the sensorimotor stage that children go through a period of dramatic growth and learning
- As kids interact with their environment, they are continually making new discoveries about how the world works.

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Piaget's Stages of Cognitive Development

- 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.

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Piaget's Stages of Cognitive Development

- The cognitive development that occurs during this period takes place over a relatively short period of time and involves a great deal of growth
- Children not only learn how to perform physical actions such as crawling and walking, they also learn a great deal about language from the people with whom they interact.
- Piaget also broke this stage down into a number of different sub-stages. It is during the final part of the sensorimotor stage that early representational thought emerges.

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Piaget's Stages of Cognitive Development

- The sub-stages of the sensorimotor stage:
 - a) **Reflexes (0-1 month):** During this sub-stage, the child understands the environment purely through inborn reflexes such as sucking and looking.
 - b) **Primary Circular Reactions (1-4 months):** This sub-stage involves coordinating sensation and new schemas, e.g. a child may suck his or her thumb by accident and then later intentionally repeat the action because the infant finds them pleasurable.

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Piaget's Stages of Cognitive Development

- c) **Secondary Circular Reactions (4-8 months):** During this sub-stage, the child becomes more focused on the world and begins to intentionally repeat an action in order to trigger a response in the environment e.g. a child will purposefully pick up a toy in order to put it in his or her mouth.

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Piaget's Stages of Cognitive Development - Summary

Stage	Age Range	Description
Sensorimotor	0-2 years	Coordination of senses with motor response, sensory curiosity about the world. Language used for demands and cataloguing. Object permanence developed
Preoperational	2-7 years	Symbolic thinking, use of proper syntax and grammar to express full concepts. Imagination and intuition are strong, but complex abstract thought still difficult. Conservation developed.
Concrete Operational	7-11 years	Concepts attached to concrete situations. Time, space, and quantity are understood and can be applied, but not as independent concepts
Formal Operations	11+	Theoretical, hypothetical, and counterfactual thinking. Abstract logic and reasoning. Strategy and planning become possible. Concepts learned in one context can be applied to another.

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Piaget's Stages of Cognitive Development

- d) **Coordination of Reactions (8-12 months):**
- During this sub-stage, the child starts to show clearly intentional actions
 - Children begin exploring the environment around them and will often imitate the observed behavior of others
 - The understanding of objects also begins during this time and children begin to recognize certain objects as having specific qualities. For example, a child might realize that a rattle will make a sound when shaken.

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Language Development in Infancy

- What is a language? - It is a system of communication in which words and their written symbols combine in various regulated ways to produce various messages - meaning.
- Language serves a wide range of purposes for the developing child such as enabling the child to:
 - Interact with other children
 - Communicate information
 - Express his feelings, wishes or views
 - To influence other children's behavior

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Piaget's Stages of Cognitive Development

- e) **Tertiary Circular Reactions (12-18 months):** Children begin a period of trial-and-error experimentation during the fifth sub-stage. For example, a child may try out different sounds or actions as a way of getting attention from a caregiver.
- f) **Early Representational Thought (18-24 months):** Children begin to develop symbols to represent events or objects in the world in the final sensorimotor sub-stage. During this time, children begin to move towards understanding the world through mental operations rather than purely through actions.

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Language Development in Infancy

- To explore and understand their environment by asking questions and discussing with others
- To escape from reality whenever they want through fantasy and imagination
- To recognize their perceptions, direct their thinking, control their actions, sharpen their memories and even to modify their emotions
- To learn new things – very important

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How Do Children Acquire Language ?

- Children make enormous strides in language development through childhood very rapidly
- A number of theories have been proposed to explain this rapid language acquisition
- It should however be noted that no single theory provides a sufficient explanation of all the processes underlying the acquisition of language.
- Among the theorists of language development are those who advocate the influence of heredity and those who hold on to the learning account.

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a) The nativist theory

- In support of their view, the nativists make several claims about language acquisition which include:
 - In many different cultures, normal children acquire language relatively quickly and learn it well
 - Children receive incomplete environmental input, and that means the input alone cannot explain the amazing feat of language acquisition, that means the child is therefore pre-set to acquire language
 - Human beings learn language far more easily and quickly during a certain **critical period of biological development.**

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How Do Children Acquire Language ?

- Most theorists today however, maintain a more middle ground position recognizing the roles that both heredity and environmental factors play in language development.
- This is known as the **interactionist approach**
- Some of the common theories are:
 - a) **The nativist theory**
 - b) **The learning theory**
 - c) **The interactionist theory**

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a) The nativist theory

- A critical period is a time during which a child is sensitive to a particular environmental stimulus that does not have the same effect on him when he encounters it before or after this period
- The critical period for language is 2 years to 13 years
- Before 13 years, a child may achieve fluency of any native language or even in two or more languages simultaneously without special training.

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a) The nativist theory

- Linguist Noam Chomsky (1968) was the first to recognize and propose that children are born with an innate mental structure that guides their acquisition of language and in particular, grammar
- Chomsky called this inborn mental structure a **Language Acquisition Devise (LAD)**
- This is an innate ability that permits children, as soon as they have picked up enough words, to combine them into grammatically correct sentences
- According to Chomsky, LAD contains a set of rules common to all languages. No matter what language children hear, they speak it in a rule-oriented fashion right from start.

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a) The nativist theory

- After puberty (13 years) it is extremely difficult to learn a first language
- Young children who have had brain damage (injury) recover their language capacity rapidly and completely if it occurs before puberty 13 years.

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b) The Learning Theory

- The learning theorists vary in the degree to which they adhere to traditional learning principles
- Some of learning theorists are:
 - B.F Skinner (1957)**
 - B.F Skinner apply the principle of reinforcement to explain language development
 - In this view, language just like any other behavior is acquired through operant conditioning

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b) The Learning Theory

- Reinforcement and imitation therefore to some extent contribute to early language development - but do not offer complete explanation.
- This is because young children do not only copy the speech of others because a great many things they say are not directly taught, but also the child is creative with language which cannot be explained by learning theory.

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b) The Learning Theory

- As the baby makes babbling sound, that are almost like adult speech, the parents or other care-takers selectively reinforce each of the baby's bubbling sounds by giving attention, give approval by smiling, hugging and speak in return
- The sounds which are reinforced are repeated, they are approved again and these sounds are vocalized more often
- Little by little by giving their greatest approval to the infant's closest approximations to adult speech sounds, parents shape their child's verbal behavior into what increasingly resembles adult speech.

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b) The Interactionist Theory

- All the interactionist theories stress the social context of language learning
- An active child, well endowed for acquiring language, observes and participates in conversations with others
- From these experiences, children gradually discover the functions and regularities of language
- In the interactionist view, normal language develops as a result of a delicate balance between parent and child understanding

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b) The Learning Theory**ii. Albert Bandura (1989)**

- Albert Bandura (1989) propose that the child learns language primarily through **imitation** or **observational learning**
- According to this view, the child picks up, words, phrases and sentences directly by imitating what he hears
- Then by combining with reinforcement and generalization - or applying what he has learned to new situations, the child learns when it is appropriate or inappropriate to use particular words and phrases.

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b) The Interactionist Theory

- When parents speak to children in a way that recognizes how much the children already know and understand, they increase their children's chance of comprehending a novel message.
- An advocate of the social interaction view, Jerome Bruner has proposed that the environment provides the language-learning child with a Language Acquisition Support System (LASS) - (Bruner 1983)
- Bruner emphasizes the parents or primary care-takers role as facilitators of children's language acquisition

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b) The Interactionist Theory

- Parents introduce play objects to children, talk about them and events that are present and easily visible to the child
- Adults also facilitate young children's language acquisition by playing nonverbal games, use simplified speech and elaborate and reword children's utterances.

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Milestones of Language Development During The First Two Years

Approximate Age	Milestone (Language Achievement)
0 At birth	Crying.
6 weeks	Infants coo, making pleasurable vowel sounds which consist of 000 or eee
4 months on	Infants and parents establish joint attentions, and parents often verbally label what the baby is looking at
6-10 months	Infants babble, sounds ma, ba, na thus adding consonants to the cooing vowel sounds and repeating syllables mamama or bababa, by 7 months. Babbling of hearing infants starts to include many sounds of mature spoken languages. In hearing impaired babies, speech like babbles are delayed or stop all together by 9 months. Infants are capable of playing simple games, such as pat-a cake. These provide practice in conversational turn-taking and also highlight the meaning and function of spoken words.
10 - 12 months	Infants use preverbal gestures such as showing and pointing to influence the behavior of others.
12 months	Infants say their first recognizable word.
12 - 18 months	Holophrases - one word utterances, usually the names of familiar objects.
18 - 24 months	Vocabulary expands from about 50 - 200 words
20-26 months	Toddlers combine two word sentences referred to as telegraphic speech

Term Paper

While citing the relevant theories, discuss the development milestones of a child between 0 – 3 years under the following sub-topics:

1. Motor Development/Physical development
2. Emotional/social development

NB: Submission date: 10/12/2018