Cognitive Approach: Piaget's View

- 1. Jean Piaget obtained Ph .D. degree on biology at the age of 21, then he interested to study on psychology.
- 2. He went to Paris to study abnormal psychology where he met Alfred Benet and worked with collaboratively.
- 3. He studied to his daughters from birth to long period.
- 4. Then after, he focused thinking abilities of adolescence.
- After Paris, he came to Switzerland became the director in Jean Jacques Rousseau's research institute.
- 6. Then, he worked in the university of Geneva on the research on cognitive psychology, genetic epistemology as the post of a professor.



Jean Piaget (1896-1980)

Cognitive Approach

- 1. Jean Piaget's theory of cognitive development is developmental stage theory because it suggests that all human beings follow a Series of predictable changes in Order.
- 2. It is comprehensive theory about the nature and development of human Intelligence.
- 3. According to him, intelligence means the mental and cognitive process or
- 4. Cognitive process that enables children to know the world which they interact.
- 5. Cognition means somehow thinking in which children think about the world differently.

Cognitive Approach.....

- **1. Piaget's theory of cognitive development** is a comprehensive theory about the nature and development of human <u>intelligence</u>.
- 2. The theory deals with the <u>nature of knowledge</u> itself and how humans gradually come to acquire, construct, and use it.^[1]
- 3. Piaget's theory is mainly known as a <u>developmental</u> <u>stage theory</u>. Piaget "was intrigued by the fact that children of different ages made different kinds of mistakes while solving problems".
- 4. He also believed that children are not like "little adults" who may know less; children just think and say words in a different way.
- 5. By Piaget thinking that children have great cognitive abilities, he came up with four different cognitive development stages, which he put out into testing.

- 1. In this theory, he tried to clarify how human being gradually acquires, constructs uses intelligence.
- 2. He claimed that biological maturation, environmental experience lead a person to a progressive reorganization of a mental process which he called cognitive development.
- 3. During the mid of twentieth century behaviorism had a great influence in America, so many psychologists paid greater attention on behaviorism, at the same period Piaget developed cognitive development theory which attracted psychologists in this domain, thus he is known as father of cognitive development theory.
- 4. His basic assumption was 'Human beings are rational, active, alert and competent they do not merely receive information; they also process it.

- 1. According to Piaget 'Human being does not only response to the stimulus like behaviorism but provides information and scheme'. So, other psychologists like Gardener called him as structuralist.
- 2. Piaget's view is constructivism because knowledge is continuous according to ages and self-construction process.
- 3. His theory is known as genetics epistemology.
- 4. Epistemology is the discipline which studies knowledge in which how knowledge is obtained according to the human growth and development.

- 1. According to him, human brain is not just mirror which reflects as it is or blank sheet in which environment inputs everything.
- 2. Human brain is dynamic structure. So, every human is actively interacting about the phenomenon and develops cognitive schemes in the brain.
- 3. So, cognitive development is the result of interaction between biological abilities and physical materials.
- 4. Knowledge is obtained by intuitive process. Every human should have biological capacities if so he can learn more from the environment.

- Basic Features / cognitive structure s of Piaget's cognitive deployment theory
- 1. Cognitive Scheme
- 2. Adaptation
 - a)Assimilation
 - b)Accommodation
- 3. Equilibration

1) Schem/Schema

- ➤ It is one of the most important concept according to Piaget which appears in the primary stage of children.
- In this step children process own experiences, perception and environmental information according to his/her ages.
- In the later period Children develop more complex scheme which he/she has innate energy.

2) Adaptation

- ➤ Knowledge is required person and environment. There must be interaction between person and environment to obtained knowledge.
- ➤ According to Piaget, mental development of the children determine how he/she interact with environment whether actively or passively.
- Children adapt their environment information, experiences and perception according to their comfort which is known as 'adaptation'.
- > Through the process of adaptation human adjustment should be possible by two means: they are assimilation and accommodation.

a) Assimilation:

➤ If the environmental information, experiences and perception are matched with previous scheme this process is known as "assimilation"

b) Accommodation:

If the environmental information, experiences and perception do not match with the previous scheme, children ignore them and try to modify the previous cognitive scheme and adjust those information, experiences and perception with the new manner/value is known as "accommodation".

3) Equilibration:

Human brain is always trying to maintain equilibrium between assimilation and accommodation but some time it does not although, human brain maintains equilibrium which is known as "equilibration".

Stages of cognitive development.

- Sensory motor stage.(birth-2years)
- Pre-operational stage.(2-7years)
- Concrete-operational stage. (7-11 years)
- Formal operational stage. (11-adolescence)

Sensory motor stage:

- > During this period, the infants perceive the world through sensory and perceptual by co-ordination experiences such as seeing and hearing with physical motoric actions.
- > An infants can achieve ability of object performance.
- The children of this ages develop their thinking abilities by playing with objects, removing objects from out and in.

<u>Pre-operational stage</u>: This stage can be divided into two <u>sub-stages</u>.

- a) Pre-conceptual sub stage (2-4 years).
- Children develop language skill during this stage and symbolic play.
- > They can't specifically differ the people but can diffentiate colors
 - b) Perceptual or intuitive sub stage (4-7 years)
- Children become very curious and ask many questions.
- ➤ Centriation is noticed in conservation. They are concentrated to only one characteristics of a object at a time.
- According to Piaget, they lack the ability of thinking in terms of conservation or reversibility. Example: two kinds of cylinder with water.
- They have the great feelings of egocentrism. (Feeling of every is for him/her.)

- ➤ Although, the development of mental abilities the ages of 2,3 years children don't diffentiate living and nonliving things which is known as "animism".
- ➤ At the age of 5 and 6 the children concentrate on the objects but don't think on secondary characteristics. They have lack of centriation.
- > Although, they remember the past story, search for lost toys.
- Piaget considered that children primarily learn through imitation then build up symbolic images through internalization of experiences.
- ➤ They become able to link their experiences to symbols such as words, which are the fundamental elements of their operation in later stages.

Concrete operational stage (7-11 years)

- Children can think logically about objects and events.
- > They become able to understand conservation and reversibility.
- They have knowledge of thinking about objects and categorize the them with their characteristics.
- During this period, children have the following development of knowledge.
- Knowledge of Conservation.
- Knowledge of Reversibility.
- Knowledge of object perfornence.

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Formal operational stage (11-onwards)

- > This is the period of eleven to adolescence.
- This is the beginning of formal thinking period.
- They can think about concrete and abstract.
- They can give reason logically and can draw conclusions from the information available in rational manner.
- They can have thinking of hypothetical deductive, speculation of possibilities, remembering the past, plan in the present and think how to implement in the future.
- It is the peak point of cognitive and intellectual development but incentive environment and physical facilities would affect cognitive development of the children.