



Mental Development

Dr. Anuradha Rai

Associate Professor(B.Ed)

Harish Chandra P.G. College Varanasi.

मानसिक विकास

- संज्ञान (cognition) से तात्पर्य मन की उन आन्तरिक प्रक्रियाओं और उत्पादों से है, जो जानने की ओर ले जाती हैं।
- इसमें सभी मानसिक गतिविधियाँ शामिल रहती हैं- ध्यान देना, याद करना, सांकेतिकरण, वर्गीकरण, योजना बनाना, विवेचना, समस्या हल करना, सृजन करना और कल्पना करना।
- एक अध्ययन क्षेत्र है जिसमें बालक द्वारा **सूचना प्रसंस्करण**, **भाषा सीखने**, तथा मस्तिष्क के विकास के अन्य पहलुओं पर ध्यान केन्द्रित किया जाता है। **मुक्त ज्ञानकोश विकिपीडिया से**

Mental Development: Concept

- Mental development is a process of thought construction including remembering, problem solving, decision making and language development .
- Thought construction: How a person perceives think and gain understanding of his own world through interaction of H*E
- Language Development : a process by which children come to understand and communicate language. i.e. development of receptive and expressive language .

Thus it can be said

- Mental development includes development of such **abilities** as attending, perceiving, observing, remembering, imagining, thinking, solving problems and growth of intelligence **as well as of language.**

Swiss developmental psychologist

Jean Piaget (1896–1980)

The theory deals with the nature of knowledge itself and how humans gradually come to acquire, construct, and use it.¹ Piaget's theory is mainly known as a developmental stage theory.



Piaget Theory of Cognitive Development

The development of knowledge(**schema**) is a form of adaptation and involves interplay of two process –

- **Assimilation** (to modify to fit in the existing thought and action) Assimilation refers to the process of taking in new information by incorporating it into an existing schema.
- **Accommodation** (to modify one's thought as per the new) accommodation is what happens when the schema itself changes to accommodate new knowledge.

There is a tendency of achieving equilibrium to feel the gaps in knowledge by restructuring believes.

- It can be said that mental development is another name for extending the intellectual horizon of the child.
- To begin with, **the world is one large**, “booming, buzzing confusion” to the child.
- Gradually, details are perceived and understood,
- **differences are realized** and
- experiences and knowledge are **organized** into new relations.
- This is made possible through processes of differentiation and organization or integration.
- This differentiation and integration is what Piaget termed as assimilation and accommodation

Stages of Development

Cognitive development occurs in a series of four distinct, universal stages,

Sensory motor stage(0-2 yrs)

Pre operational stage : Pre- conceptual stage,(2-4yrs)
Intuitive stage (4-7yrs)

Concrete operational stage(7-11 yrs)

Formal operational stage (12 onwards)

Sensory - Motor stage

- **Sensory + motor activities** - base of information and perception
- *Infants begin learning to use their senses to explore the world around them. Relates sensory experience with their motor action. learns about world*
- **Reflex pattern –intellectual movement**
- **Object Permanence**-process of internalizing true thought



Pre-Operational Stage

Preschoolers, ages three to six, should be at the "preoperational" stage of Piaget's cognitive development theory, meaning they are using their imagery and memory skills.

The term Operational refers to logical manipulation of information,

The child's thinking during this stage is pre (before) operations. This means the child cannot use logic or transform, combine or separate ideas (Piaget, 1951, 1952).

Pre-Operational Stage

- Two subdivisions of this stage
- **Preconceptual stage** (2-4 yrs.) the stage of collection of information for concepts formation
- **Intuitive stage**(4-7yrs)the stage of starts of intuition

Pre Conceptual Stage

- *Characterized by the child being able to mentally represent an object that is not present and a dependence on perception in problem solving.*
- This substage is when children are able to understand, represent, remember, and picture objects in their mind without having the object in front of them.
- **Attention**
 - very transitory and on only one aspect at a time*
 - not on moving aspect only what is static.*
- **Rudimentary concept formation**
 - (all boys are raju/chacha)i.e. class formation on the basis of perception only.*

Intuitive stage

- The Intuitive Thought Substage, lasting from 4 to 7 years, is marked by greater dependence on intuitive thinking rather than just perception (Thomas, 1979).
- Stage of representational thought.
- (bird = *image of bird will represented in their mind*)
- Start of imagination . (*Tell story of raja rani etc.*)



Intuitive Stage

- At this stage, children ask many questions as they attempt to understand the world around them using immature reasoning.
- The stage when reasoning appears, But **Transductive reasoning**. (transitive inference)
- Thinking is '**irreversible**' in that the child cannot appreciate that a reverse transformation would return the material to its original state.
- **Fails to conserve** Conservation is the understanding that something stays the same in quantity even



Intuitive stage

- **Centration** is the tendency to focus on only one aspect of a situation at one time.
- **Egocentrism** refers to the child's inability to see a situation from another person's point of view. The egocentric child assumes that other people see, hear, and feel exactly the same as the child does.
- **Animism** the belief that inanimate objects (such as toys and teddy bears) have human feelings and intentions. By animism Piaget (1929) meant that for the pre-operational child the world of nature is alive, conscious and has a purpose.

Intuitive stage

- **Concept of time:** night, today- tomorrow
- **Concept of space:** up down only (not left right)
- *Thinking is **focused** on states rather than on transformations. Children fail to track what has happened to materials and simply make an intuitive judgment based on how they appear 'now' though its appearance changes.*

Concrete Operational Stage

- Characterized by the **appropriate use of logic.**
- Operations start functioning
- can only **solve problems that apply to concrete events** or objects. (*not abstract concepts or hypothetical tasks.*)
- **Reasoning is now logical** (general to particular) but inductive reasoning only(**Syllogistic Reasoning**)

Inductive reasoning involves drawing inferences from observations in order to make a generalization

- from here starts the **concept of morality**
- **Problem solving ability** starts.



Concrete Operational Stage

- **Decentration**
- **Elimination of Egocentrism** i.e. *acquires the ability to view things from another individual's perspective*
- **Concept of Time and Space expands**
- **Reversibility**
- **Conservation ability** which leads to understanding of concept of weight length, volume etc.
- **Transitivity**- The ability to recognize logical relationships among elements in a serial order (for example, If A is taller than B, and B is taller than C, then A must be taller than C or if $a=2b$, and $a=2c$, then $b=c$) Can arrange and can form categories more specifically

Formal Operational stage

- *It is characterized by an increased independence for thinking through problems and situations*
- **Use of symbols** instead of concrete objects (suppose weight is x and length is y)
- **Hypothetical Thinking** starts
able than children to think about what is possible, instead of limiting their thought to what is real.
- leads to the tendency of discovering

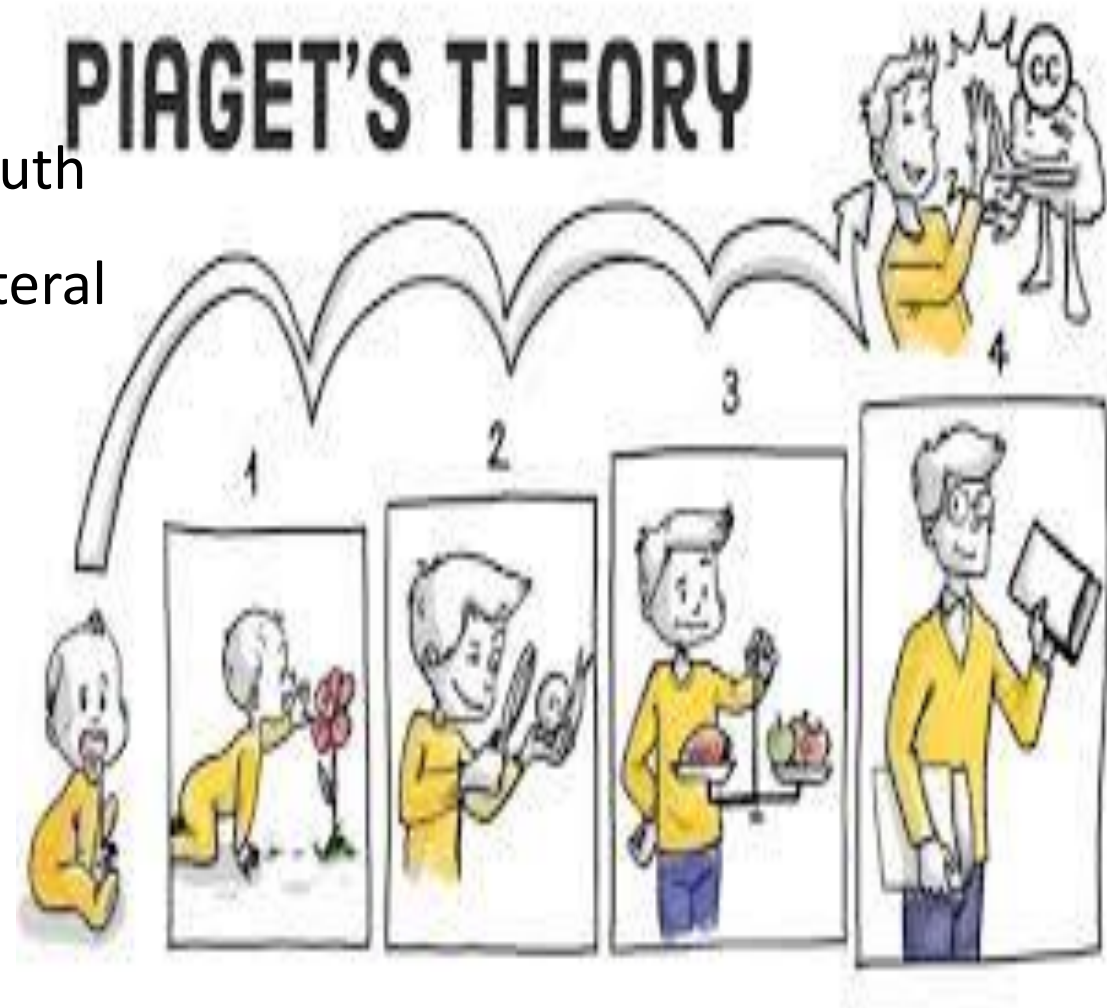
Formal Operational stage

- **Abstract thinking** able to think about abstract ideas like thinking about interpersonal relationships, politics religion, and morality.
- **Problem-solving through logical and hypothesis testing method** instead of trial and error
- **Metacognition** thinking more often about the process of thinking itself (introspection and self-consciousness.) also called reflective thinking recursive thinking .

Formal Operational stage

- Deductive and inductive reasoning
- Interpositional logic is the ability to judge the truth of logical relationships of propositions.. Quadilateral –square-then square is a quadrilateral.
- Reflective thinking
- Reception to application- leading to ability of generalization

he can understand the concept of friction and can apply to many practical situations



References

- McLeod, S. A. (2018). Preoperational stage. Simply Psychology. <https://www.simplypsychology.org/preoperational.html>
- <http://thiyagumathpscyhology.blogspot.com/2014/07/jean-piagets-theory-of-cognitive.html>
- <http://www.healthofchildren.com/C/Cognitive-Development.html>