

The four stages of cognitive development



**ASSIGN
BUSTER**

The cognitive development of psychology scientifically studies the internal mental processes of humans and animals, including memory, thinking, problem solving, language and decision making. This approach is known as cognitivism, and psychologists that study cognitivism are interested in how information is processed and how it influences our behaviour. The 5 key areas of the cognitive perspective are recognised as PALMT (Perception, Attention, Language, Memory, and Thinking).

One of key contributors to the cognitive perspective is Swiss psychologist, Jean Piaget. He is well known for his work with children and his theories that describe a child's cognitive development.

Piaget had a theory that the intellectual development of children happens in 4 stages: Sensorimotor Stage, Pre-Operational Stage, Concrete Operational Stage and the Formal Operational Stage. Piaget described the developmental changes to be caused by:

1. Assimilation: in which by fitting new experiences into an existing schema, for example, an infant knows how to grab onto his favourite toy and thrusts it in his mouth, he then sees a rattle and applies this same "grab and thrust" schema by grabbing it and putting it into his mouth.
2. Accommodation: this is changing the existing schema to fit new experiences, for example, the infant sees a much larger toy and tries to apply the "grab and thrust" schema, but this obviously doesn't work; so a new schema is adapted to the new object - possibly a "squeeze and drool" schema.

Stage 1 – Sensorimotor stage (0 – 2 years): This is the stage when the early movements of an infant are uncoordinated and they do everything with their hands.

Piaget believed that an infant's understanding of the world depends on their motor development, which explains that the learning of the infant is adapted through sensory information being matched by the infant's motor experiences; this creates new schemas that the infant adapts to.

Infants up to eight months old have not yet developed object permanence; this is when infants do not realise that objects continue to exist when they are out of sight: “ out of sight, out of mind”. For example, when playing peek-a-boo, the infant does not realise that the object is still there behind the hands, which is why they can get so excited. When the infant is about one year of age, this is when object permanence starts to develop.

Stage 2 – Pre-Operational Stage (2 – 7 years): By this stage, the child would understand the difference between past and future. For example, a child wants a toy and starts crying, when you say “ we'll get it later”, the child will then stop crying.

The pre-operational stage explains the Pre-conceptual sub-stage and the Intuitive sub-stage of a child's development.

A child 2 – 4 years old would be experiencing the pre-conceptual sub-stage. The child would be representing actions through symbols (e. g. language and creative play). For example, a child has a toy doll and represents it as a real baby and plays the role of ‘ mummy and daddy’. The pre-conceptual sub-

stage is also the stage when concepts have not yet fully formed; an example being that a child recognises all men as “daddy”.

The Intuitive sub-stage explains the characteristics in children 4 – 7 years of age; including Egocentrism, Centration and how a child cannot explain the underlying principles of what they feel/sense.

Egocentrism is the inability to take another’s perspective and the child only sees things from his point of view. Piaget conducted an experiment to investigate this concept; he had a simple plaster mountain range and he put a child on one side of the model and seated himself on the other side, he then asked the child to tell him what he, Piaget, could see. The child could not place himself in Piaget’s shoes and only said what he saw from his position.

Centration is when the child focuses only on one aspect and ignoring the other. For example, a child is shown two same sized glasses of water and recognises that they are both the same. But when one of the glasses of water is poured into a taller glass, even though the amount of water is still the same, the child believes that the taller glass has more water than the other.

Stage 3 – Concrete Operational Stage (7 – 11 years): By this stage, the child can adapt to logical rules but only concrete examples. This can be identified in the concept of “conservation” – which is when the quantity of the object is the same despite the change in appearance. A child by this stage can apply logical rules and understand that the amount of water in the taller glass and the original glass is still the same. Piaget believed that a child at

this stage cannot understand hypothetical or abstract problems since the child's understanding is limited due to the experience of the physical world.

During the concrete operational stage, the child starts to develop seriation; which is the ability to put things in order (e. g. putting dolls in order of size).

Stage 4 - Formal Operational Stage (11+ years): A child can now apply abstract and systematic thought to problems - to this there is a stage 3 and a stage 4 when working out problems. For example, when the child is given a problem to solve, a stage 3 thinker would construct a plan and try random combinations to solve it, whereas a stage 4 thinker would construct a plan and apply a principle then a hypothesis and then test it to confirm the answer.

In conclusion, the cognitive perspective studies the internal mental processes of humans and animals and how the information we process affects our behaviour and learning. Jean Piaget is one of the main contributors to this perspective - he is well known for his theories in a child's intellectual development. His theory was that a child's development happens in 4 stages - Sensorimotor Stage, Pre-Operational Stage, Concrete Operational Stage and the Formal Operational Stage; he believed that these changes were caused by assimilation and accommodation. Piaget believed that the two most important stages were the Sensorimotor and the Pre-operational stage, since they shape the infant's childhood learning. Piaget's theory was originally rejected by many but for the past 100 years, his theory has been proven useful and seen in a lot of the work that involves a child's development.