

Piaget's Theory of Cognitive Development

- Psychology for Health and Social Care (BMHP4003_LON)
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- Assignment component 1: Group presentation.





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Introduction



- Psychology - The word psychology derives from the Greek word psyche, for "spirit" or "soul". The latter part of the word derives from -λογία -logia, which refers to "study" or "research".
- The lifespan theory - Lifespan theory represents a way of thinking about the development of individuals as they change throughout the lifespan - infancy and childhood, adolescence to the oldest ages.
- The topic - This topic examines Piaget's theory of cognitive development.
- What are we going to talk about:
 - Yoanna Uzunova - Table of content ; Group members; Introduction.
 - Portia Turkson - Jean Piaget and his theory; Stages of cognitive development.
 - Emmanuel Kissner - Piaget's theory of moral development; How did Piaget develop his theory?
 - Voyka Nikolova - Applying Piaget's theory; Strengths and weaknesses of Piaget's theory.
 - Rositsa Zdravkova - Conclusion; References; Thank you.

According to the Cambridge dictionary, psychology is the scientific study of how the human mind functions and how it affects behaviour or the influence of a particular person's character on their behaviour.

In other words, psychology is a discipline that aims to analyse the mental and behavioural processes of humans and their interactions with the physical and social environment.

Psychology has various branches, including cognitive, forensic, social psychology, and developmental psychology.

From the psychology lectures with Diya Ganguly, we learned that developmental psychology studies the psychological changes that occur in a person during his life. The study of developmental psychology is important to understanding how we learn and adapt. We also learned about lifespan developmental theory, which is a scientific approach that aims to explain growth, change, and consistency across the lifespan.

In this presentation, we will focus on Piaget's theory of early childhood cognitive development. Through lifespan developmental theory, we will examine the four stages of childhood, which, according to Piaget, occur in the same order for all children, in all cultures and environments. How children's intelligence changes as they grow, and they go through certain stages depending on their intelligence and ability to perceive mature relationships.

Jean Piaget and His Theory

- Jean Piaget is the first systematic study of children's intellectual development.
- Early years.
- Birth of Piaget's theory.
- Psychological laboratories in Zurich.
- Meeting Simon-Binet.



Jean Piaget was a Swiss psychologist who was the founder of genetic epistemology. According to Stanford Encyclopaedia of Philosophy, the term “epistemology” comes from the Greek word's “episteme” and “logos.” “Episteme” can be translated as “knowledge” or “understanding” or “acquaintance,” while “logos” can be translated as “account” or “argument” or “reason.” According to Oxford Languages, genetic epistemology is the theory of knowledge, especially about its methods, validity and scope, and the distinction between justified belief and opinion.

Piaget showed an early interest in nature and especially in collecting shells. He made his first publication when he was ten - it is a one-page account of his observations of an albino sparrow (Dr. C. George Boeree, 2006).

After high school, he went to the University of Neuchâtel. There, he begins to describe his views. His entire life's work revolved around one essential idea: "In all realms of existence (organic, mental, and social), there are 'totalities' that are qualitatively separate from their parts and impose an organisation." This principle forms the basis of his philosophy (Dr. C. George Boeree, 2006).

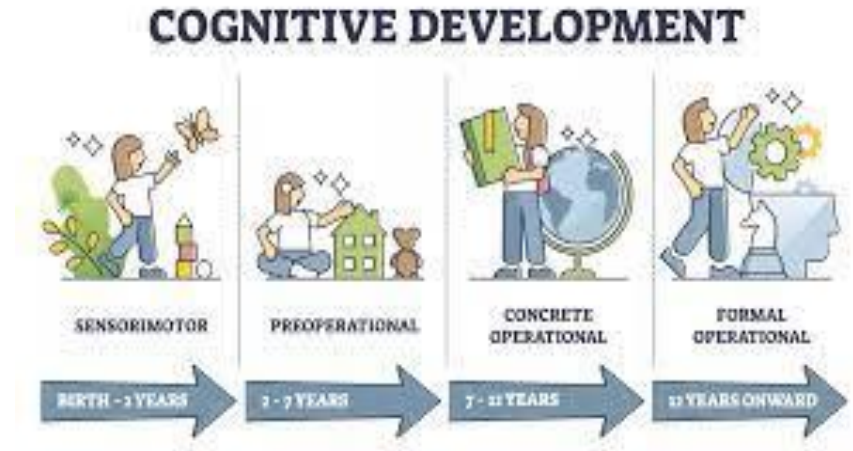
After graduating from university, Piaget worked for a year in psychological laboratories in Zurich and in the famous psychiatric clinic of Bleuler. During this period, he became acquainted with the works of Freud, Jung, and others. He conducted research on IQ testing while teaching psychology and philosophy at the Sorbonne in Paris in 1919, when he also met the famous Simon-Binet. Piaget became intrigued with the reasons children gave for their wrong answers to the questions that required logical thinking and began interviewing his subjects at an all-boys school using the psychiatric interviewing techniques he had learned. He believed that these incorrect answers revealed significant differences between the thinking of adults and children and became interested in how children reason (Dr. C. George Boeree, 2006).

Piaget began his study of children by creating detailed notes on the development of his own children. He not only observes their behaviour, but also adapts various experimental tasks with which he can better understand children's thinking and the moments in which it changes and develops. In this way, he introduced the more reliable clinical method in the study of cognitive development, which gives much more accurate information than pure observation.

Piaget spent his whole life researching the stages of development, as well as how childhood learning, and mental processes influenced later cognitive development.

Stages of Cognitive Development

- **Ages: Birth to 2 Years.** The first stage is the sensory motor stage, and during this stage the infant focuses on physical sensations and on learning to co-ordinate his body.
- **Ages: 2 - 7 Years.** Thinking is still intuitive (based on subjective judgements about situations) and egocentric (centred on the child's own view of the world).
- **Ages: 7 - 11 Years.** Piaget considered the concrete stage a major turning point in the child's cognitive development because it marks the beginning of logical or operational thought. This means the child can work things out internally in their head (rather than physically try things out in the real world).
- **Ages: 12 and over.** The formal operational period begins at about age 11. As adolescents enter this stage, they gain the ability to think in an abstract manner, the ability to combine and classify items in a more sophisticated way, and the capacity for higher-order reasoning.



Piaget studied children from infancy to adolescence using naturalistic observation of his own three children and sometimes controlled observation too. He recorded the results of his observations in a diary, outlining their development. He also used clinical interviews and observations of older children who were able to understand questions and hold conversations. According to Jean Piaget's theory of cognitive development, children progress through four distinct intellectual stages that correspond to how complex their thinking becomes as they age. Every child goes through the phases in the same order, and the interactions between a child and their surroundings as well as their biological maturation determine how they grow up. At each stage of development, the child's thinking is qualitatively different from the other stages, that is, each stage involves a different type of intelligence. Piaget's stages are a set of stages in the process of human development that occurs over time. His theory classifies the stages during a child's cognitive development into different ages. Piaget proposed four stages of child development: Sensorimotor stage, Preoperational stage, Concrete operational stage, Formal operational stage.

Ages: Birth to 2 Years. The baby picks up knowledge of the world through their senses and their behaviours (moving around and exploring its environment).

The sensorimotor stage is when a variety of cognitive skills are developed. At about 8 months the infant will understand the permanence of objects and that they will still exist even if they cannot see them, and the infant will search for them when they disappear. Object permanence or understanding that an object still exists even if it is hidden, is the key accomplishment at this stage. It necessitates the capacity to create a mental schema of the item. Towards the end of this stage the general symbolic function begins to appear where children show in their play that they can use one object to stand for another. They begin to utilise language after they realise that words may be used to describe both things and emotions.

Ages: 2 - 7 Years. At the beginning of this stage the child does not use operations, so the thinking is influenced by the way that things appear, rather than logical reasoning. A child is unable to conserve, which means that they do not comprehend that quantity does not change even when the appearance varies. A child's thinking is dominated by how the world looks, not how the world is. It is not yet able to think logically or solve problems. At this age, infants also exhibit animism. This is the tendency for the child to think that non-living objects (such as toys) have life and feelings like a person.

Ages: 7 - 11 Years. Children still have difficulties with abstract thinking but begin to think logically about concrete events. Children also start to think more about other people's feelings and thoughts during this period as they become less egocentric.

Ages: 12 and over. From about 12 years children can follow the form of a logical argument without reference to its content. People learn to think abstractly throughout this period and learn to examine hypotheses logically. This stage is characterized by the emergence of scientific thinking, the formulation of abstract theories and hypotheses when the individual is faced with a problem, and the beginning of moral reasoning.

Piaget's theory of moral development



- Main aspects of children's understanding of moral issues:
 - Children's understanding of rules - Where do rules come from?; Can rules be changed?; Who makes rules?
 - Children's understanding of moral responsibility - Who is to blame for "bad" things?; Is it the outcome of behaviour that makes an action "bad"?; Is there a difference between accidental and deliberate wrongdoing?
 - Children's understanding of justice - Should the punishment fit the crime?; Are the guilty always punished?
- Piaget (1932) suggested two main types of moral thinking:
 - Heteronomous morality (5-9 years).
 - Autonomous morality (9-10 years).

Piaget was also one of the first psychologists to specifically outline a theory of moral development. He began by studying the way children interact and play with one another, identifying the different rules they applied and their beliefs about what was right and wrong. Piaget also gathered information by interviewing children about acts like stealing and lying, noting the differences in children of different ages. His resulting theory identifies two distinct stages of moral development.

Two primary categories of moral thought were proposed by Piaget in 1932. Moral realism, or externally imposed morality, is another name for the stage of heteronomous morality. Children see morality as abiding by unalterable laws and norms established by other people.

In the first stage of moral development, children follow strict rules and are completely obedient to authority. Piaget states that this occurs in younger children in part because of their cognitive development. For young children, rules are seen as inflexible things that do not change, which Piaget calls moral realism. Children in this stage are also judge how wrong a particular action is by its immediate consequences; negative consequences or punishment is seen as an automatic response to breaking a rule.

They acknowledge that all rules are set out by a higher authority (such as parents, teachers, or God) and that disobeying the law will result in swift and harsh punishment. Children at this age view regulations as being unalterable and absolute. They believe that laws cannot be altered and have always been the same.

As children begin to learn new things about the world through their interactions with other children and adults, they progress into the second stage of moral development. In this stage, Piaget states that children learn how to critically evaluate rules and apply them based on cooperation and respect with other children. Children begin to learn to take the perspective of others in this stage. Intention is also an important concept in this stage. Children begin to judge how wrong an action is by the intention of the perpetrator, and punishment is adjusted accordingly.

Moral relativism, or autonomy based on your own norms, is another name for this stage of moral development. Children understand that there is no such thing as an absolute right or wrong and that morality is based on intentions rather than results. Piaget believed that around the age of 9-10 children's understanding of moral issues underwent a fundamental reorganisation. The egocentrism of middle childhood is starting to fade, and they are now able to view moral principles from other people's perspectives. Children's perspectives on the nature of norms, moral responsibility, as well as punishment and justice, all shift as a result, and their thinking starts to resemble that of adults. For instance, when it comes to gaming rules, the kids understand that they are necessary to ensure fair play and to stop fighting.

How did Piaget develop his theory?

- Binet Institute in the 1920s.
- Schemas.
- Accommodation.
- Assimilation.
- Equilibrium.

In the 1920s, Piaget worked at the Binet Institute where his responsibility was to translate English intelligence test questions into French. He got fascinated by the explanations kids provided for their incorrect responses to questions requiring logical thought. He thought that these wrong responses demonstrated important distinctions between adult and juvenile thought processes. Children's intelligence differs from an adult in quality rather than in quantity. This means that children think differently from adults and see the world in diverse ways.

Children actively build up their knowledge about the world. They are not passive, awaiting someone to fill their heads with knowledge and the best way to understand children's reasoning was to see things from their point of view. Schemas is one of the major ideas of Piaget's theory. A schema describes the behavioural and cognitive processes involved in knowing and comprehending. The categories of knowledge that people use to comprehend and interpret the world are represented by schemas. An existing schema can be expanded upon and made more sophisticated. This is in many ways inherent to both teaching and learning. According to Piaget, a schema entails a category of knowledge and the method used to acquire that knowledge. The new knowledge is adjusted as people experience new things, and it is added to or altered pre-existing schemas. A child may have a schema about cats. For example: if his only experience has been with small cats, the child may believe that all cats are small. If this kid encounters a large cat, he will take in this new knowledge, altering the old schema to incorporate this new piece of information.

The main concepts of Piaget's theory are accommodation, assimilation, and equilibrium.

Accommodation is the process of taking in added information in the environment and changing pre-existing information to fit the added information. This is important because it establishes how people will perceive new concepts, schemas, knowledge, etc.

Assimilation, on the other hand, is how people perceive and adapt to added information. This is when we are faced with added information but look at the old information, we have stored to interpret the new.

These concepts, according to Piaget, are essential and cannot exist separately. To assimilate an object into an existing mental scheme, the features of that object must first be considered or accommodated to some extent.

In Piaget's developmental theory, the need for equilibrium is what drives cognitive development. That is, when a person encounters a new situation that cannot be easily assimilated, disequilibrium occurs. This triggers frustration and other negative emotions until the added information can be accommodated/assimilated. Once a person adapts to the new situation, growth and development occur.



Applying Piaget's theory.



- The theory of cognitive development in children by Jean Piaget continues to influence how we comprehend and learn today.
- Cognitive learning in the classroom.
- Cognitive learning strategies.
- Learning how to learn.

What makes Piaget's model stand out from other developmental theories is its special attention to cognitive development. It focuses on how human beings process information and how that processing changes throughout life. His theory focuses on the mechanisms that help us adapt and learn new concepts or skills. Based on his findings, Piaget suggested that schools focus on providing students with opportunities to develop and practice specific skills to aid in their moral development. He purported that children would learn best by situations that required cooperative decision making and problem solving with other children. Piaget believed that this method would be more effective than simply indoctrinating children with norms and rules. For example, in the classroom, teachers can apply Piaget's concepts of assimilation and accommodation when introducing new material. They can help students approach a new idea through the lens of what they have already learned. When they achieve what Piaget calls equilibrium, the students can move on to build on their knowledge. One key element for teachers to be cognizant of is their students' particular age and relative development. To help young children learn to distinguish basic shapes and colours, preschool teachers might refer to Piaget's Sensorimotor Stage. Teachers for Pre-schoolers through Grade 2 should take a close look at the Preoperational Stage. It is important to note that children in this stage will not have a grasp of logic. Rather, their thoughts and behaviours will be egocentric and more intuitive. The approach to the two later stages, Concrete Operational and Formal Operational, is much the same. The teachers can assess where their students are within the age-appropriate stage and then help them transition to the next. For older students in the final stage, teachers can build on the basic tools of adaptation and build lesson plans that ease the acquisition of new knowledge and skills.

Strengths and weaknesses of Piaget's theory.

- Strengths of Piaget's theory - It has many practical applications.
- In forensics.
- In medicine.
- Weaknesses of Piaget's theory - The main disadvantage of the cognitive approach is that it refers to cognitive processes that we cannot directly observe. It relies heavily on inference.



No theory is without its criticisms.

Strengths: Piaget's ideas have an enormous influence on developmental psychology. His theories changed methods of teaching and changed people's perceptions about a child's world. Piaget was one of the first psychologists to investigate cognitive development in-depth. His theories have proven useful in the real world, especially in the field of education, for comprehending and speaking with children. The theory of Piaget has been used in all areas of education. According to Piaget's theory, educational programmes should be designed to correspond to the stages of development.

Also, Piaget's theory helps to study and understand intellectual development in children with autism and other mental problems (Child Development, 1982).

Another strength of Piaget's theory is its application in criminology. In recent years, the criminal psychologists made considerable progress in studying and explaining criminal behaviour within the framework of cognitive theory. Here, psychologists focus on the mental processes of individuals. Cognitive theorists try to understand how criminals perceive and mentally represent the world around them (Psychological Theories of Crime, 2022).

Weaknesses: Do stages really exist? Critiques of Formal Operation Thinking believe that the final stage of formal operations does not provide correct explanation of cognitive development. Not every person is capable of abstract reasoning and many adults do not even reach level of formal operations. Another criticism of Piaget's work is his approach to methodology. Many point to the fact that Piaget based his work on an exceedingly small sample size that included his own children and their peers. He hardly ever provided any information about how he chose his subjects, how many kids he looked at to get his conclusions, or anything even vaguely statistical but the age (in years and months) of each individual kid who responded to his questions. One of his most influential books, *The Origins of Intelligence in Children* (Piaget, 1952), had only three participants; his own three children. The theory is also attacked because it allegedly underestimates how children learn. Where Piaget posited that children in the Preoperational Stage were egocentric and incapable of understanding the experiences of others, subsequent research has contradicted this. In fact, research has found that children as young as three are capable of non-egocentric thoughts and behaviours.

Undeniably, Piaget is a pioneer in an approach to studying children that has produced extremely important results, despite misgivings about his methods.

The cognitive approach has the major benefit of having real-world applications, but it also has a major drawback in that it makes it impossible to see the alleged causes of behaviour.

Conclusion.

Like Beilin said (1992), the influence of Piaget's work on developmental psychology is like that of Shakespeare's influence on English literature.

Piaget has indisputable merits in the study of child development. His theory of cognitive development marked the beginning of an "era" in child psychology that shaped the ideas of child cognitive development for several generations of age psychologists.

Piaget's concept gave rise to a school that attracted many collaborators and opponents. His cognitive theory is aimed at exploring the adaptive nature of human intelligence, in which he views intelligence as a set of activities that are related to the acquisition, organization, processing, and use of knowledge. For Piaget, the child is an active participant in the exploration of his environment, unlike other theories where he is considered a static receiver of information, and cognitive development is reduced to a product of the maturing brain. The main idea of Piaget's theory is that knowledge is not a copy of reality but is a product of the interrelationship of man with his environment. Therefore, it will always be individual, special, and peculiar.

Although Piaget did not link his work to education, many educational researchers eventually showed how his theory could be applied to learning and teaching. Several educational policies and practices are based on cognitive development theory.

The influence of Piaget's theory has led psychologists to rethink the idea of cognitive development in the modern era. A new researchers has been guided to some important questions which Piaget posed to investigate new findings in the fields of cognitive development.

Various attempts to identify the most eminent psychologists of the 20th century, such as that of Steven Haggbloom et al. (2002), invariably place Piaget in the top tier. In Haggbloom's empirical scheme, Piaget ranked second in professional journal citations (after Sigmund Freud) and fourth in citations for introductory psychology textbooks (after Sigmund Freud, B. F. Skinner, and Albert Bandura).

Piaget died in Geneva in September 1980. He was 84 years old.



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Thank you.

- Thanks for your attention.

