

PIAGET THEORY

How is knowledge constructed? How does this differ from other approaches?

Knowledge is constructed as a continuous process that is external to the child and developed through discovery. This differs from cognition and applied cognition in that it believes that learning comes more from discovery and throughout different set stages.

What are the stages of cognitive development and what are their dominant characteristics?

The first stage of cognitive development is the sensorimotor stage (birth to 2 yrs.). In this stage the reflexes of the child become adaptive, their behaviors are goal driven, and mental representations of objects and events develop. The second stage is the preoperational stage (2-7 yrs.). Throughout this stage the child is egocentric, begins symbolic play, and abstract representations begin to appear. The third stage is the concrete operational (7-11 yrs.). Now, true mental operations can be performed and concrete problems solved, yet, the child has difficulty thinking hypothetically. The final stage is the formal operational (11 yrs. and up). In this stage, the child is able to solve problems that are abstract in a systematic way and reasons in a hypothetical manner as well as develop concerns for social issues.

What are the different kinds of knowledge and a characteristic of each?

The three types of knowledge are: Physical Knowledge (facts about objects), Logical-Mathematical Knowledge (abstract), and Social Knowledge (learned from other people). Examples of each type of knowledge in each stage are as follows:

Physical Knowledge	Logical-Mathematical Knowledge	Social Knowledge
S Exploring blocks		This is a cat.
P Colors, red, green	There are 5 blocks	Saying please, is polite.
CO Objects sink/float	Conservation	Oct. 31 is Halloween.
F Chemicals have different reactions.	Systematic problem solving	The president is elected by the Electoral College.

What is the role of inconsistencies in learning and the processes involved in overcoming those inconsistencies?

Inconsistencies in learning provide children the opportunity to adapt and create a more sophisticated mode of thought.

Assimilation: Perceiving new objects or events in terms of existing schema.

Accommodation: Modification of existing schema after a new experience.

Equilibration: A child's transition from one stage to the next.

Is regression in learning possible? Why or why not?

According to Piaget, regression is not possible because his steps are concrete and distinct from other steps. Each stage is distinct and the sequence is fixed. The stages are also cumulative and each step involves everything accumulated in previous steps.

What is the role of peers, or social interaction, in general, in learning?

Generally, the role of peers and social interaction in learning is to help one another move past egocentrism and learn understanding of others' perspectives. This is achieved by feedback from other children. Instruction should include peer teaching and social negotiation.

What are the biggest strengths of Piaget in applying it to classroom practice?

Piaget's ideas can be used in classrooms in all grade levels. His theories are hands on and, taught in the classroom, would be used with much social interaction. The idea is for the student to have experiences and develop learning from those experiences. The classroom would be student centered with interactions between students and the teacher and between the students themselves. A writing portfolio system would be good to use in this type of classroom where a student could develop writing skills through experiences in the classroom and then to show it at the end of the year to document development in writing. These lessons are also excellent for science where a student makes a theory and then works through hands on experiments to find the results. Lessons should be kinesthetic in nature and allow students to see and touch the project they are working on. As a student sees the results of the projects they do, they are able to see what they know and understand what they don't know.

What are the biggest weaknesses of Piaget in applying it to classroom practice?

Piaget underestimated the cognitive ability of infants and young children and overestimated the cognitive ability of adolescents. With infants and young children, automaticity can be practiced and they can learn more. With adolescents, Piaget thought that development was finished by the time they were eleven years old which misses some levels of the brain development for teens.

His stages processes did not account for the variability in performance of kids. Neo-Piagetian ideas regard the stages as something that comes like waves, but Piaget thought that it was more like a stair step process, which did not account for differences among children. By understanding that some less strong areas are developing at the same time as stages, teachers can accommodate the differences and various rates of learning among children.

Piaget did not understand the value of sociocultural environment on children. We know that many things effect a child's growth and development which include home environment, social structure, exposure to outside social situations, even nutrition and it helps a community and a classroom teacher individually to consider these things in the development of lessons.