Learning theory: ch. 11 piaget

Epistemologya branch of philosophy that is concerned with the nature of knowledge. Jean PiagetHad a Ph. D. In Biology. He wrote a lot of papers about mollusks, but became interested in the intellectual abilities of children while working at The Binet Laboratory. He used the clinical method to test child intelligence. He and his wife also studied their own 3 children over the course of their lifetimes. ONLEARNING THEORY: CH. 11 PIAGET SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder NowClinical methodAn open-ended form of questioning used by Piaget. IntelligenceA dynamic trait that allows an organism to deal effectively with its environment, and to create an approximation to the conditions optimal for an organism's survival under certain circumstancesGenetic epistemologyOne name often used to refer to Piaget's theory because it attempts to trace the development of intellectual capabilities, or intellectual potential. Schema (plural: schemata)The potential to act in a certain way. A general potential to perform a class of behaviors. An element in an organism's cognitive structure that allows it to determine how it can respond to the physical environment. Can manifest overtly (behavior) or covertly (thinking). ContentThe manifestation of a schema, in terms of a specific response to specific stimuli. Cognitive structureThe number of schemata available to an organism at any given time. AssimilationThe process of responding to environment in accordance with one's cognitive structure. Refers to a kind of matching between the cognitive structures and the physical environmentAccommodationThe process by which the cognitive structure is modified. The creation of new schemata; learning. Functional invariantsOccur at all levels of intellectual developmentEquilibrationThe innate tendency to organize one's experiences to ensure maximum adaptation. The continuous drive toward equilibrium or

balance. According to Piaget, The driving force behind intellectual growthInteriorizationGradually decreased dependence on the physical environment and the increased utilization of cognitive structures; the process by which adaptive actions become increasingly covert rather than overt. OperationsInternal covert actions; " thinking" ReversibilityThe most important characteristic of operations: The idea that, once performed, an operation can be mentally undone; Once something is thought, it can be " unthought." Concrete operationsOperations that are applied to concrete environmental events. Formal operationsOperations that are completely independent of physical experience; allow the child to solve purely hypothetical questionsStages of Development1. Sensorimotor Stage - birth to about 2 years

2. Preoperational Thinking Stage - 2 to 7 years -two parts: preconceptual thinking (2-4) and period of intuitive thought (4-7)

3. Concrete Operations Stage - 7 to 11 or 12 years

4. Formal Operations Stage - 11 to 14 or 15 years

Sensorimotor StageThe first stage of development according to Piaget. Lasts from birth to about two years. Characterized by the absence of language. No " thinking." toward the end of the stage, children develop the concept of object permanencePreoperational Thinking StageSecond stage of development according to Piaget. Last from about 2 to 7 years and has two subdivisions: preconceptual thinking and a period of intuitive thought. Preconceptual ThinkingA subdivision of preoperational thinking that lasts from about 2 to 4 years. Rudimentary concept formation and classification

based on similarity. Period of Intuitive ThoughtSubdivision of preoperational thinking last from about 4 to 7 years. Tendency to solve problems Intuitively instead of in accordance with some logical rule, and failure to develop conservation. ConservationThe ability to realize that number, length, substance, or area remains constant even though they may be presented to the child a number of different waysConcrete Operations StageThe third stage of development according to Piaget. It lasts from about 7 to 11 or 12 years. Children develop the ability to conserve. Ability to deal adequately with classes, with seriation (i. e. the ability to arrange things from smallest to largest and vice versa) and with number concepts. Thought processes are directed to real events the child observes, no abstract concepts yet. Formal Operations StageThe final stage of development according to Piaget. Lasts from about 11 or 12 to 14 or 15 years children cannot deal with hypothetical situations. Thought processes are not exclusive to what is directly observed. Thinking at this stage is as logical as it will ever be. Learning DilemmaTerm coined by Dollard and

Miller, which points out that all learning depends on failure. According to Piaget, failure of previous knowledge to allow for assimilation of an experience causes accommodation, or new learning. Progressive EquilibriumThe balance or organization that is sought is optimal under existing circumstances and those circumstances are constantly changingPiaget on educationEducation must be individualized and Educational material must be tailored to each child's cognitive structure