

Chapter 8: Cognitive Development in Early Childhood

- Educational Principles Derived from Piaget's Theory
 - Discovery learning - the idea that children learn through discovering themselves
 - Sensitivity to children's readiness to learn - play to your child's interests
 - Developmentally appropriate practice
 - Acceptance of individual difference
- Piaget called "egocentric speech"
- Vygotsky viewed as foundation for all higher cognitive processes
- Children's Private Speech
 - Helps guide behavior
 - Used more when tasks are difficult, after errors, or when confused & when in the "Zone" (zone of proximal development)
 - Gradually becomes more silent
 - Decreases as the child grows older
 - But may reappear when confronted by an especially difficult task
 - Children with learning and behavior problems use for longer
 - Arises out of children's internalization of speech they have heard from others
 - Especially likely when the child is working on challenging problems
- Relationship of Private Speech to Task Difficulty Among 5- and 6-Year-Olds
- Vygotsky's Sociocultural Approach
 - Cognitive growth seems to originate in their social experience with older children and adults
 - Vygotsky challenged some of Piaget's views
 - Agreed:
 - Kids are active, motivated learners
 - Seeking to understand the world
 - Emphasized how culture and social interaction guides cognitive development
 - Focus: What can a child do with assistance?
 - Center of Socio-cultural Theory
 - ZPD: Zone of Proximal Development
 - ZPD made up of skills, ideas, and understandings (abilities) just beyond reach —but can occur with support
 - They can't do it by themselves YET, but they CAN do it with some assistance
 - The role of the adult or older child
 - Support child's efforts with scaffolding
- Scaffolding
 - Occurs when people provide learning opportunities
 - Materials
 - Hints
 - Clues
 - When a child is stuck
 - Key: only give as much support as needed (because they can do it with assistance)
 - Once skill is mastered, scaffold not needed
- Social Origins of Early Childhood Cognition:
 - To promote cog dev social interaction must have:

- Scaffolding
 - Lev Vygotsky, a sensitive structuring of the young child's participation in learning encounters.
 - The tutor's role is
 - to lead the child
 - to arouse the child's interest
 - simplify the task
 - maintain the child's interest by keeping the activity within her ability
 - make sure the task is appropriate to the child's level of cognitive development
 - control frustration by anticipating problems
 - convey enthusiasm
 - Vygotsky said that people did this naturally
 - A teacher lifts a child to help her place another block on a tower of blocks.
 - Changing the level of support given as a child begins to master an activity
 - When the child has little notion of how to do a task, the adult uses direct instructions, breaking down the task into manageable units, suggesting strategies
 - As competence increases, effective scaffolders gradually withdraw support
- Guided participation
 - Broader than scaffolding
 - Kids learn values & practices via participation in family and community activities
 - Not necessarily communication
 - Learning social and cultural lessons on their own - via observations
- Vygotsky's Theory and Early Childhood Education
 - A Vygotskian classroom promotes
 - Assisted discovery, with teachers guiding children's learning (with explanations & verbal prompts)
 - An emphasis on peer collaboration
 - Make believe play is the ideal context for fostering cognitive development in preschool
 - Make believe play rich in private speech
- Information Processing Approach
 - Recall: Looks at intelligence by breaking it down into its component processes
 - Paying attention to a stimulus
 - Encoding Info
 - Retrieving Info from memory
 - Comparing Different Pieces of Info
- Information Processing: How preschoolers process information
 - Limitations and advances in preschoolers ability to
 - Pay attention to the environment
 - Remember
 - Develop strategies and solve problems

- Understand their own mental processes and those of others
- Increases in abilities in:
 - Attention
 - Sustained attention increases sharply between 2 and 3 1/2 years
 - Impulsivity decreases in early childhood
 - From brain changes and caregiving
 - Frontal lobe & basal ganglia growth
 - Child's environment and parenting
 - Children who are experiencing warm and sensitive caregiving and stimulating/responsive homes, gain control of their attention earlier
 - Attention ability
 - Greatly improves during preschool years
 - Deficits of child's control of attention
 - Salient vs. relevant (only pay attention to the most catching things)
 - Planfulness
 - Child's ability related to achievement-related skills and social skills.
 - Memory
 - Memory: retention of information over time
 - Memory comes in many forms
 - Sensory Memory
 - Subconscious picking up of sensory information from environment
 - Fleeting impressions
 - Working/Short-term memory
 - Conscious, short term representations of what one is actively thinking with at a given time
 - Digital Span Task: Span increases during early childhood (How many numbers a kid can remember)
 - 2 digits at ages 2 to 3
 - 5 digits at age 7
 - Memory abilities stimulated by interactions with adults as well as brain growth
 - Long Term Memory Development
 - In the first few years of life, children are capable of basic information processing
 - They do remember some events and details quite clearly.
 - But their memories seem unpredictable, because they do not encode, store, retrieve information in the way they will when they are older.
 - In the first few years of life, the human brain is not yet fully mature.
 - The corpus callosum (a network of structures connecting the two hemispheres) is not fully myelinated and their prefrontal cortex is not fully developed.