Human Development Exam 2

Cognitive Development

Definition:

- Changes in thinking and reasoning
  - Ex. Language, thought, memory, imagination

Theories:

A. Piaget

- Theory of Genetic Epistemology
- Adaption: managing new information
  - Assimilation- using existing knowledge to understand new information.
    - Ex. (calling a zebra a horse with white strips, sippy cup to straws)
  - Accommodation- creating new knowledge to understand new information.
    - Ex. (calling a zebra a zebra, straw to cup)

B. Vygotsky

- Socio-cultural development
  - Knowledge acquired through social interaction with the world
    - **Scaffolding**: structured support for learning
    - **Private speech**: transferring knowledge from world to mind (by talking to self)
    - **Zone of proximal development**: difference between what can be done (or is known) and what can be done (or known) with help.

C. Information Process

- The ability to process new information
  - Computer is used as an analogy
    - Ex. Hardware=brain (like attention memory)
  - Development is a function of processing speed, efficiency, and capacity.

4 Stages of Cognitive Development:

~Kids require knowledge about the world differently

1. Sensorimotor (0-2 years)
   - Learning through senses and motor skills
   - Acquires multiple perspectives
2. Preoperational (2-6 years)
   - Egocentrism
   - Acquires multiple perspectives
3. Concrete Operations (6-12 years)
   - Loss of egocentrism
   - Acquires logic thought (about concrete problems)
4. Formal Operations (12+ years)
   - Thinks symmetrically
   - Acquires abstract thought and logic

Memory

- Retaining and recalling past experience
- Basic Processes:
  - **Encoding**- transferring information into memory
  - **Storage**- marinating the information over time
  - **Retrieval**- recovering information from memory
    - Recognition-assisted recovery of past information
    - Recall- unassisted recovery of past information

Modal Model of Memory:

- Sensory memory

    - Unlimited capacity
    - Brief duration
- Short term memory
    - Limited capacity
    - 7+/-2
- Long term memory
    - Unlimited capacity
    - Unlimited duration

Storing Memories

- Scripts: memory for event sequence (ex. Eating at a restaurant)
- Schemas: memory for category (Ex. Birds, chairs, racial profile)

- Implicit Memories: unconscious
    - H. M, Clive Wearing, Memento
- Explicit Memories: conscious
    - Semantic- facts (capitol of Al)
    - Procedural- how (tie shoes)
    - Episodic- events (birthday party)
    - Autobiographical- personal life story
        - Infinite amnesia: poor retention of early personal memories

Memory Problems

- Infantile Amnesia
    - Theory of mind: immature understanding the mind
    - Sense of self-immature sense to self
    - Narrative ability: poor story telling
- False Memories
    - Source Monitoring
    - Suggestibility
- Forgetting
- Eyewitness Testimony
    - Witnesses interviewed 10 times before trial
    - 100% children testify in a case annually
- Memory is efficient, but inaccurate
  (EX. -Flashbulb memories)

Intelligence

Difficult to define

- Allows:
    - Planning
    - Abstract Thinking
    - Reason
    - Problem Solving
    - Learning
- Language often correlates with intelligence
- 3 A's
    - Ability
    - Achievement
    - Aptitude

Theories

- Multiple component models
    - General intelligence + Specific skills
- Multiple Intelligences (Howard Gardner)
    - Verbal
    - Mathematical

        - Musical
        - Art
        - Interpersonal (social)
        - Intrapersonal (personality)
        - Spatial
        - Physical (athletics)
    - No intelligence (1, 2)
    -

IQ (Intelligence Quotient)
DQ: (Development Quotient)

- Mental Age/ chronological age X 100
- Standardized
- WAIS, WISC, WIPSI
- IQ scores are relatively stable over time

Factors that affect IQ

- Genetics
    - Identical twins reared together
    - Identical twins reared apart
    - Fraternal twins (siblings)

- SES (Income and Education)
- Cultural Majority
- Malnutrition

Representation

- Mental Representation
    - Mental counterpart to something in the world
- Symbolic representation
    - 1 thing represents another
- Example of Representation
    - Written and spoken language
    - Images, videos, and maps
    - Gestures, signs, numbers

Language Development

~ Language is how we communicate meaning

- Spoken
- Written
- Gestures
- Nonverbal

~Babies get a lot of support

Language Milestones

~ Babies

- Crying (birth)
- Cooing and babbling (2-4 months)
- Comprehending words (6-10 months)
- Producing gestures (6-10 months)
- Producing words (10-15 months)
    - Over extension- use words too badly
    - Under extension- use words to narrowly
- Vocabulary explosion (16-24 months)
    - At 50 words
    - Naming insight
    - Fast mapping: very fast word learning
- Combining words (20-26 months)
    - Telegraphic: speech, short, high content words