Chapter 13 Outline

I. Piagetian Approach: The Concrete Operational Child
   • Concrete Operations: Third stage of Piagetian cognitive development (approximately from ages 7 to 12), during which children use mental operations to solve concrete (actual) problems.

   A. Cognitive Advances
      1. Space and Causality
      2. Categorization
         • Seriation: Ability to arrange objects in a series according to one or more dimensions.
         • Transitive interference: Understanding of the relationship between two objects by knowing the relationship of each to a third one.
         • Class inclusion: Understanding of the relationship between a whole and its parts.
      3. Inductive and Deductive Reasoning
         • Inductive reasoning: Type of logical reasoning that moves from particular observations about members of a class to general conclusion about that class.
         • Deductive Reasoning: Type of logical reasoning that moves from a general premise about a class to a conclusion about a particular member or members of the class.
      4. Conservation
         • Identity: The concept that people and many things are basically the same even if they change in form, size, or appearance.
         • Reversibility: Piaget’s term for a preoperational child’s failure to understand that an operation can go in two or more directions.
         • Decenter: In Piaget’s terminology, to think simultaneously about several aspects of a situation.
         • Horizontal decalage: Piaget’s term for the inability to transfer learning about one type of conservation to other types, which causes a child to master different types of conservation tasks at different ages.
      5. Number and Mathematics

   B. Influences of Neurological Development and Schooling

   C. Moral Reasoning
      • rigid obedience to authority
      • increased flexibility
      • equity or taking specific circumstances into account

II. Information-Processing Approach: Attention, Memory, and Planning
   • Executive function: The conscious control of thoughts, emotions, and actions to accomplish goals or solve problems.
   A. How do Executive Skills Develop?
• Prefrontal cortex: The region of the brain that enables planning, judgment, and decision making.
• Processing speed: Usually measured by reaction time.

B. Selective Attention
• Selective attention: The ability to deliberately direct one’s attention and shut out distractions.
• Inhibitory control: The voluntary suppression of unwanted responses.

C. Working Memory Span

D. Metamemory: Understanding Memory
• Metamemory: Understanding of processes of memory.

E. Mnemonics: Strategies for Remembering
• Mnemonic strategies: Techniques to aid memory.
• External memory aids: Mnemonic strategies using something outside the person.
• Rehearsal: Mnemonic strategy to keep an item in working memory through conscious repetition.
• Organization: Mnemonic strategy of categorizing material to be remembered.
• Elaboration: Mnemonic strategy of making mental associations involving items to be remembered.

III. Psychometric Approach: Assessment of Intelligence

• Wechsler Intelligence Scale for Children (WISC III): Individual intelligence test for schoolchildren, which yields verbal and performance scores as well as a combined score.
• Otis-Lennon School Ability Test: Group intelligence test for kindergarten through twelfth grade.

A. The IQ Controversy

B. Influence on Intelligence
   1. Genes and Brain Development
   2. Influences of Schooling on IQ
   3. Influence of Race/Ethnicity on IQ
   4. Influence of Culture on IQ
   • Cultural bias: Tendency to include questions that use vocabulary or call for information or skills that are more familiar or meaningful to some cultural groups than to others.
   • Culture-free tests: Tests with no culture-linked content.
   • Culture-fair tests: Experiences common to people in various cultures.
   • Successful intelligence: Skills and knowledge needed for success within a particular social and cultural context.
C. Is There More Than One Type of Intelligence?

1. Gardner’s Theory of Multiple Intelligences
   - **Theory of multiple intelligences**: Gardner’s theory that each person has several distinct forms of intelligence.

2. Sternberg’s Triarchic Theory of Intelligence
   - **Triarchic theory of intelligence**: Sternberg’s theory describing three types of intelligence: componential, experiential, and contextual.
     - **Componential element**: Analytical aspect of intelligence.
     - **Experiential element**: Insightful or creative aspect of intelligence.
     - **Contextual element**: Practical aspect of intelligence.
   - **Tacit knowledge**: Information gleaned informally, not explicitly.
   - **Sternberg Triarchic Abilities Test (STAT)**: Seeks to measure each of the three aspects of intelligence.

3. New Directions in Intelligence Testing
   - **Kaufman Assessment Battery for Children (K-ABC)**: Nontraditional individual intelligence test designed to provide fair assessments of minority children and children with disabilities.
   - **Vygotsky’s Dynamic Tests**: Emphasizes potential rather than present achievement.

IV. Language and Literacy

A. Vocabulary, Grammar, and Syntax
   - **Simile and metaphor**: Figures of speech in which a word or phrase that usually designates one thing is compared to or applied to another.
   - **Syntax**: How words are organized into phrases and sentences.

B. Pragmatics: Knowledge about Communication
   - **Pragmatics**: The practical uses of language to communicate.

C. Literacy
   1. Speaking
      - **English-immersion**: Approach to teaching English as a second language in which instruction is presented only in English.
      - **Bilingual education**: System of teaching children in their native language while they learn English, and later switching to all-English instruction.
      - **Bilingual**: Fluent in two languages.
      - **Two-way (dual-language) learning**: Approach to second language education in which English speakers and non-English speakers learn together in their own and each other’s languages.
   
   2. Reading
      - **Decoding**: Process of phonetic analysis by which a printed word is converted to spoken form before retrieval from long term memory.
      - **Visually Based Retrieval**: Child looks at the word and retrieves from long-term memory.
• **Phonetic, or code-emphasis approach**: Approach to teaching reading that emphasizes decoding of unfamiliar words.

• **Whole-language approach**: Approach to teaching reading that emphasizes visual retrieval and use of contextual clues.

• **Metacognition**: Awareness of a person’s own mental processes.

2. **Writing**

V. **The Child in School**

A. Entering First Grade

B. Influences on School Achievement: An Ecological Analysis

1. **Self-Efficacy Beliefs**
   • **Self-efficacy**: Belief that one can master schoolwork and regulate their own learning.

2. **Gender**

3. **Parenting Practices**
   • **Extrinsic motivation**: External means.
   • **Intrinsic motivation**: Internal motivation.

4. **Socioeconomic Status**
   • **Social capital**: Family and community resources upon which a person can draw.

5. **Peer Acceptance**

6. **The Educational System**
   a. **School Environment**
   b. **Current Educational Developments**
      • **Social promotions**: Promoting children who do not meet academic standards.
   c. **Computer and Internet Use**

C. **Children with Learning Problems**

1. **Mental Retardation**
   • **Mental retardation**: Significantly subnormal cognitive functioning indicated by an IQ of 70 points or less.

2. **Learning Disabilities**
   • **Dyslexia**: Developmental disorder in which reading achievement is substantially lower than predicted by IQ or age.
   • **Learning disabilities (LDs)**: Disorders that interfere with specific aspects of learning and school achievement.

3. **Hyperactivity and Attention Deficits**
   • **Attention-deficit/hyperactivity disorder (ADHD)**: Syndrome characterized by persistent inattention and distractibility, impulsivity, low tolerance for frustration, and inappropriate overactivity.

4. **Educating Children with Disabilities**

D. **Gifted Children**

• **Giftedness**: Children with high achievement.

1. **Identifying Gifted Children**
2. **What Causes Giftedness**
3. **Lewis M. Terman and the Lives of Gifted Children**
4. Defining and Measuring Creativity
   - **Convergent thinking**: Thinking aimed at finding the single correct answer to a problem.
   - **Divergent thinking**: Thinking that produces a variety of fresh, diverse possibilities.

5. *Educating Gifted, Creative, and Talented Children*
   a. Enrichment versus Acceleration
      - **Enrichment**: Approach to educating the gifted, which broadens and deepens knowledge and skills through extra activities, projects, field trips, or mentoring.
      - **Acceleration**: Approach to educating the gifted, which moves them through a curriculum at an unusually rapid pace.

6. *Julian Stanley: Seeking and Nurturing the Profoundly Gifted*