CHAPTER 11:
COGNITIVE DEVELOPMENT IN MIDDLE CHILDHOOD

- Piaget saw _____ as a major cognitive turning point from **preoperational** thinking to more advanced _____*operational* thought.

- Many **contemporary researchers** see a major transition at about _____.

CONCRETE OPERATIONAL STAGE

- Children can now perform _____ (e.g., reversibility)

- Major accomplishment = _____

- Overcome centration:

- Overcome _____.

- Logical thinker of specific _____.

- Increase in _____.

- Increase in information-processing capacity

- Control over attention & memory

Cognitive Limitations That Remain Include:

- limited _____

- difficulty applying recently acquired skills (mnemonic strategies)

- an inability to reason about _____, hypothetical problems – problems must be _____.

PIAGET vs. INFORMATION PROCESSING

- **Piaget** believes that there is a _____ in children's ability to reason logically.
    - **Qualitative change:** a completely new system of logic.

- **Information Processing Theorists** argue that changes are a result of _____

- **Quantitative change**:

    - **Implicit unconscious** use of rule.

Information Processing Theory
Development of Problem Solving Rules

- Conservation of Number Task:

    - 3 yrs:

    - 6 yrs:

    - 7 yrs:

MEMORY ABILITIES DEVELOPMENT OF
BASIC MEMORY PROCESSES

- **Short term memory improves**

    o Increase in efficiency: mnemonics and automaticity

    o Increases in capacity
        - 5 year olds digit span = 4
        - 7 year olds digit span = 5
        - 9 year olds digit span = 6
        - Adults digit span = 7

    o **Increase in Cognitive** inhibition –

- **Robbie Case**

    o Storage space

    o Operating space

Memory & Growth of General Knowledge

- Domain specific knowledge (expertise):

- Chi (1978): Novice **Adults vs. 10 y.o. children experts.**
  - Remembering 10-digit lists vs. reproducing chess positions.

  - Random Chess Positions = No meaning for experts

  - Actual Chess Positions = have meaning for expert chess players

- **Semantic Memory**

- **Constructive memory:**

  - influence on recall accuracy

MNEMONIC STRATEGIES

- Children begin to use these strategies consistently at about _____

- **Serial Position Effect - Rundus (1971)**

  - Recency Effects

  - Primacy Effects

  - **A Developmental Trend:**

  - Ornstein, Naus, & Liberty (1975):

    - primacy effect

    - recency effect

    - Does training help?

MNEMONIC STRATEGIES

- **Children > 7 yrs will initiate some activity to improve recall**

  - Why ↑ use of strategies with age?

    - direct teaching in school

    - indirect learning

    - general knowledge of the world

    - metamemory

METACOGNITION:

Metamemory:

- Once children realize mnemonic strategies improve recall, they are more likely to use them.

- Many 5- and 6-year-olds can think of only one strategy; older children think of more.

- **Flavell, Friedrichs, & Hoyt (1970)**

Individual Differences in Intelligence

Intelligence: Psychometrics

- **Reliability**
  - Test-Retest:

- **Validity**
  - Construct Validity:

  - Predictive Validity:

- **Standardization**

- **Intelligence Testing**
  - o First intelligence test by Binet.

  - o Revised as the Stanford-Binet.

  - o **Wechsler scales now more widely** used.

  - Intelligence Quotient:

  - Alternatives to standard IQ tests/definitions

BROADENING THE DEFINITION OF INTELLIGENCE

- **Academic intelligence**:

- **Gardner's Theory of Multiple Intelligences**

- **Sternberg's Triarchic Theory**

Explaining IQ Differences

- There is evidence for both **genetic** and **environmental** influences on IQ.

- The hereditary influence involves **many** genes.

- **Reaction range**

The Stability of IQ

- Stability of IQ increases with age.

- By elementary school years, intelligence tests seem to measure relatively stable aspects of cognitive functioning.

- As children grow older, IQ tests become increasingly good predictors of adult IQ.

- **<u>How Meaningful Are IQ Scores?</u>**

    - Ever since IQ scores were introduced, people have debated their value.

    - The controversy centers on issues of _____ and the question of just what an IQ score can _____.

    - **Cultural bias can affect IQ tests many ways:**
        - language fluency

        - knowledge of cultural references

        - cultural differences in definitions of intelligence

        - setting in which test is given

        - Stereotype Threat

- To overcome problems of culture bias, some psychologists have tried to develop IQ tests that are:

    - **culture-free**

    - **culture-fair**

- Attempts to develop these have not generally succeeded.

- IQ tests offer effective comparisons *within* the same culture or subculture.

What IQ Scores Can Predict

- **<u>Predictive Validity</u>**:

- In general, IQ tests are fairly good predictors of _____

- Childhood IQ may predict long-term success in occupations that require abstract thought.

- Adult IQ scores are good predictors of success in

MORAL DEVELOPMENT

- The process by which an individual comes to understand what society accepts as right and wrong.

THEORIES OF MORAL DEVELOPMENT

■ **Cognitive Theories**: emphasis on moral reasoning & related to cognitive development.

   ■ Moral development depends on:

   ■ There are 2 major cognitive theorist:

Piaget's Cognitive Theory of Moral Development

■ **Piaget** used 2 methods to study Moral Dev:

■ Questions pertaining to rules involved in playing games:

■ **Stages of Rule Development**: Children Playing Games

   ■ Preschoolers:

   ■ Age 6:

   ■ Age 10:

■ **Moral Dilemmas**

   ■ A: **John** accidentally breaks 15 cups while responding to his mom's call to dinner. 15 cups were on a tray on a chair behind the door.

   ■ B: **Henry** tried to get some jam out of the cupboard while his mom was not home. He climbed on a chair and stretched his arm but could not reach the jam. But while doing this he knocked one cup over and it broke.

Responses to Moral Dilemmas:
"Which boy is naughtier?"

■ <u>**First stage: Moral Realism**</u> (< 10 yrs) objective visible consequences of an act.

■ <u>**Second Stage: Moral Relativism**</u> (10 yrs +) The motives or intentions of the person are considered.

■ Decreasing egocentrism

■ Interaction with peers

■ Parents pointing out consequences of child's actions

Evaluating Piaget's Theory

SOCIAL & EMOTIONAL DEVELOPMENT
MIDDLE CHILDHOOD

PEER POPULARITY & ACCEPTANCE <u>MEASURING PEER ACCEPTANCE</u>

- **<u>Sociometric Nomination:</u>**

- **<u>Sociometric Rating Scales:</u>**

- **<u>Peer Status:</u>**
  - Popular

  - Rejected

  - Neglected

  - Controversial

WHAT CHARACTERISTICS ARE RELATED TO POPULARITY?

Entry Into An Unknown Group: Kenneth Dodge

- **<u>Characteristics of popular children</u>**

- **<u>Characteristics of unpopular children</u>**
  - Rejected

  - Neglected

**BULLIES AND CHILDREN WHO ARE
CHRONICALLY VICTIMIZED BY THEIR PEERS**

■ Approximately _____ of children fall into each of these categories.

■ A number of studies have documented _____
among middle-school aged children.

■ **Schwartz, Dodge, and Coie (1993)**
  ■ unacquainted **6- and 8-year-old boys** who interacted on **5 consecutive days**

CAN PEER STATUS BE IMPROVED?

■ **SOCIAL SKILLS TRAINING**.

■ It is thought that training in social skills leads to **increased peer acceptance in two ways**.

■ The **greatest obstacle** to the success of social skills training is often …?

Kenneth Dodge's Five-Stage Model of Social Competence

■ Encoding →

■ Interpretation Of Cues

■ Response Search Process → generate one or more potential responses
  ■ nonaggressive rejected children may have problem here

  ■ Rabiner, Lenhart, & Lochman (1990)

    ■ invoke automatic problem solving

    ■ invoke reflective problem solving

■ Response Decision Process

■ Enactment Process