Chapter 12: "Cognitive Development in Middle Childhood

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Bell work

- What is your definition of INTELLIGENCE?
- 5 minutes
SLO’s:

- At the completion of this class, students will:
  1. Describe major approaches to defining intelligence.
  2. Describe changes in metalinguistic awareness, vocabulary, grammar, and pragmatics during middle childhood.
  3. Discuss the role of teacher-student interaction and grouping practices in academic achievement.
Norms

- Be Prepared
- Participate
- Respect Each Other
- Give me 5!
- Have Fun!
Piaget’s Theory: The Concrete Operational Stage

- Piaget’s 3rd stage, extending from about 7 - 11 years old, this is when thought becomes logical, flexible, and organized in its application to concrete information.

- Ex. Child can determine that pouring water from a tall, narrow container into a short, wide container would be the same amount of water.
Achievements of the Concrete Operational Stage

- **Conservation**
  - Understanding that certain physical characteristics stay the same, even when the outward appearance changes.

- **Classification**
  - Focuses on relations between a general category and two specific categories at the same time.

- **Seriation**
  - Ability to order items along a quantitative dimension, such as length or weight.

- **Spatial Reasoning**
  - Understanding of space is more accurate.
Warm-up Activity

Divide into 3 groups.
Find the 12 differences between the two photos.
Can you spot 12 differences between these pictures?

Solution: 1. Carpenter's side pocket is missing. 2. Light bulb in lamp is missing. 3. Drawer handle is missing. 4. Chest pocket is colored in. 5. Top of hat is colored in. 6. Elbow on lamp arm is colored in. 7. Pant cuff is colored in. 8. Hole in board has moved down. 9. Tall jar has moved. 10. Screwdrivers have moved. 11. Bottom drawer is narrower. 12. Carpenter square is longer.
Defining and Measuring Intelligence

- During the school years, the intelligence quotient (IQ) becomes more stable and correlates with academic achievement. Most intelligence tests produce an overall score as well as scores for different intellectual factors.
- The componential approach to defining intelligence looks to identify the inner, information-processing skills that contribute to mental test performance. Memory span, effective strategy use, and speed of thinking are related to IQ.
Sternberg’s Triarchic Theory of Successful Intelligence

- Views intelligence as an interaction of analytical intelligence (information-processing skills), creative intelligence (ability to solve novel problems), and practical intelligence (application of intellectual skills in everyday situations).
Gardner’s Theory of Multiple Intelligences

- Identifies at least 8 mental abilities, each with a distinct biological basis and course of development. Helpful in stimulating efforts to define, measure, and foster emotional intelligence.
Activity #1

- Get into 3 groups.
- List intelligences and description
  - Group 1: Sternberg’s Triarchic Theory
  - Group 2: 1st half of Gardener’s Theory of Multiple Intelligence
  - Group 3: 2nd half of Gardener’s Theory of Multiple Intelligence
Language Development

- Metalinguistic Awareness - the ability to think about language as a system.
- Schooling, especially reading, contributes greatly to metalinguistic awareness and other complex language skills.
- Vocabulary continues to grow rapidly, and children have a more precise and flexible understanding of word meanings.
- Children also use more complex grammatical constructions and conversational strategies, and their narratives increase in organization, detail, and expressiveness.
- Opportunities to communicate in many situations with a variety of people help children refine pragmatics.
Children’s Learning in School

Teacher-Student Interactions:

- Caring, helpful, and stimulating teaching fosters children’s interest, involvement, and academic achievement. Educational self-fulfilling prophecies have a greater impact on low achievers and are most likely to occur in homogeneous classrooms and ones that emphasize competition and public evaluation.

Grouping Practices

- The heterogeneous context of multigrade classrooms promotes academic achievement, self-esteem, and positive school attitudes. To benefit from collaboration with heterogeneous peers, children need extensive training in cooperative learning.
Activity #2

- Divide into 2 groups
- Each person will come up to answer a question about the chapter.
- Start from back of the room then come up and ring bell to answer.
  - T or F - Leap Frog
  - Multiple Choice - Skip
  - Fill in the Blank - Run
Which is not an achievement of the Concrete Operation Stage?

A. Seriation
B. Adaptability
C. Classification
D. Spatial Reasoning

✓ B. Adaptability
Piaget’s 3rd stage, extending from about 5–11 years old, this is when thought becomes logical, flexible, and organized in its application to concrete information.

- True or False

  ✓ False: 7–11 years old
Metalinguistic Awareness is the ability to think about language as a system.
Grammar is the communicative side of language.

- True or False

✓ False: Pragmatics
identifies at least 8 mental abilities, each with a distinct biological basis and course of development. Helpful in stimulating efforts to define, measure, and foster emotional intelligence.

✓ Gardner’s Theory of Multiple Intelligence
This intelligence is aimed towards adapting to, shaping, or selecting environments.

- Creative Intelligence
- Emotional Intelligence
- Analytical Intelligence
- Practical Intelligence

D. Practical Intelligence
The heterogeneous context of multigrade classrooms promotes academic achievement, self-esteem, and positive school attitudes.

True or False

✔ True
The ability to order items along a quantitative dimension, such as length or weight, is called _________.

✓ Seriation
During the school years, the intelligence quotient (IQ) becomes less stable and correlates with academic achievement.

True or False

False: IQ becomes more stable.
All are part of Gardner's Multiple Intelligences except?

A. Emotionalist
B. Musical
C. Naturalist
D. Linguistic

✓ A. Emotionalist
Review SLO'S

✓ Describe major approaches to defining intelligence.
✓ Describe changes in metalinguistic awareness, vocabulary, grammar, and pragmatics during middle childhood.
✓ Discuss the role of teacher-student interaction and grouping practices in academic achievement.