Today's class

- Infant cognitive development
- Infant language development
- Infant and Toddler Observation Project

- Progress of your observations
- Q's re data collection
- How to analyze
- Practice analyzing

The human brain predisposes infants to learn from experience.

Babies are prewired to learn.

Still, the brain's #1 job is not learning.

It is __________.

"Survival is the brain's most important priority, safety is the most important expression of that priority." (Medina, BRFB, p. 66)

What helps infants feel safe?

Infant cognitive development

¿What is learning?

- Learning refers to changes, more or less permanent, in an individual's behavior as a result of experience.
- Genetics provides the basic plan (the blueprint) and experience determines the finished product.

What is “cognition”?

Cognition refers to:

- Perception
- Memory
- Thinking
- Language
- Learning and intelligence
  - Adaptation
  - Improvisation
  - Problem-solving

Biologically determined mental structures (schema) predispose infants to learn from experience.

Stress inhibits healthy brain development and inhibits learning. Consistently high levels of stress hormones affect the wiring of the developing brain.

How do babies learn in the first year of life?

According to Piaget, the first stage of cognitive development is the sensorimotor stage.
- What does this mean?
- What are the infant's primary strategies for learning during this stage?
- How would you support sensorimotor learning?

Jean Piaget (born 1896) was a pioneer in studying cognitive development in humans.

Brain development depends upon:

- Genetics: Biologically driven maturational processes
- Experience: Interactions with the environment
  
  Example: Distance and depth perception develops as an infant moves freely in the environment.

Affordances

Affordances are opportunities that the environment offers for perception and interaction.
Day 6 - Part 1: Cognitive Development in Infancy

Affordances refers to the opportunities that the environment offers the child for perception and interaction.

The way a child accesses what the environment offers depends upon you and upon the child:

- Past experiences
- Current developmental level
- Immediate needs and motivation
- Sensory awareness of opportunities
- Non-stressful environment

Affordances

What is your role as parent/caregiver?

Movement and perception

- Perception is a cognitive process that organizes and interprets information received through the senses and combined interactions of the various senses.
- Motor skills and perceptual development are an interactive, dynamic system.

Sensorimotor Intelligence progresses in stages

There is a reciprocal, two-way interaction, between perception and action; between sensory information and motor skills.

Stages one and two of sensorimotor intelligence

In pairs, look up and explain:

- Stage One: the stage of reflexes
- Stage Two: first acquired adaptations (e.g. modifying sucking reflex depending on...)

Sensorimotor Intelligence: stages 3 and 4

3. Making interesting sights last
   - Examples: infant smiles responding to people and/or objects; shakes rattle, repeats action. (secondary circular reaction)

Refer to pages 172 & 173

4. New adaptations and anticipation
   - The infant shows goal-directed behavior
   - Object permanence begins

Primary circular reactions | Secondary circular reactions | Tertiary circular reactions
---|---|---

Refer to pages 172 & 173

Figure 6.1: Never Ending
Berger: The Developing Person Through Childhood and Adolescence, Ninth Edition
Copyright © 2012 by Worth Publishers

The real world of movement and people

- Infants have dynamic perception, focused on movement and change.
- They have a people preference from the first days of life!
  Infants are genetically predisposed to listen to voices; to stare at faces; and to be soothed by touch.
Which stage is this?

3. Making interesting sights last
or
4. New adaptations and anticipation

Which stage is this?

3. Making interesting sights last
or
4. New adaptations and anticipation

Video: See How They Move

Stage Five of Sensorimotor Intelligence

Stage Five: New means through active experimentation

+ Piaget called infants in this stage “little scientists” because of their need for experimentation.
+ Example: An infant drops her spoon to see what will happen.

Stage Six of Sensorimotor Intelligence

Stage Six: new means through mental combinations

♦ Infants can now think before taking action
♦ Deferred imitation: infants can now copy the behavior of others after some time has passed, even days later

This is an example of ______?
**What do they learn from playing with objects?**

Playing with objects develops thinking, intelligence and language.

**What are key components of intelligence?**

In addition to memory and adaptation to new situations, intelligence includes:
- Desire to explore
- Self-regulation
- Creativity
- Communication
- Deciphering non-verbal communications

Ref: Brain Rules for Baby by John Medina

**Using and playing with objects develops in stages**

- Simple exploration
- Mouthing
- Using object for its intended purpose
- Active exploration and experimentation, inventing new ways of using
- Imaginative play and symbolic representation

**Video: See How They Move**

Take notes of ideas for supporting infants development

**5-minute write**

- One key piece of new knowledge.
- How will it affect you personally or professionally? i.e. What changes in attitudes or future actions?

**How to observe?**

- Objectivity
- Non-judgment
- Close attention
- Recognizing and focusing on significant behaviors
- Relating to a developmental point of view