Overview

- Maturation and Development
- Motivation
- Memory and Forgetting
Learning Goals

- Differentiate between Maturation and Development
- Understand basic principles of physical, social, and intellectual development so you can teach in a way that supports students’ development.

Maturation and Development

- **Maturation**: Genetically programmed, naturally occurring changes over time
- **Development**: Changes that occur over time as the result of maturation and environmental supports
- Types:
  - Physical
  - Social
  - Intellectual
- The purpose of education is to provide an environment that will support students’ development
Development

- Maturation
- Environment
- Development

Development Observations

- Individuals develop at different rates
  - Age does NOT determine a child’s development
- Development is orderly
  - New skills and abilities build on already known skills and abilities
  - Teachers CANNOT expect students to learn something if they have not mastered prerequisite skills
- Development takes place gradually
  - Parents and teachers have to be patient with pupils
Types of Development: Physical Maturation

- **Gross motor skills:** Large movements
  - Lay, Crawl, Walk, Run

- **Fine motor skills:** Coordination of small muscle movements
  - Writing
  - Drawing

Supporting Physical Development

- **Provide proper nutrition**
  - Children with proper nutrition:
    - Have more energy
    - More eager to explore new environments
    - More alert

- **Provide adequate healthcare**

- **Provide opportunities for children to be active and practice fine motor skills**
Types of Development: Social

- Erikson’s Stages of Psychosocial Development: Each stage is characterized by a crisis
  - Crisis: a social challenge that presents opportunities for development
  - Positive resolution of the crisis leads to growth but negative resolution (or no resolution) leads to poor adjustment

### Erikson’s Stages of Psychosocial Development

<table>
<thead>
<tr>
<th>Stage</th>
<th>Age (years)</th>
<th>Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infancy</td>
<td>0-1</td>
<td>Trust vs. Mistrust*</td>
</tr>
<tr>
<td>Early Childhood</td>
<td>2-3</td>
<td>Autonomy vs. Shame &amp; Doubt</td>
</tr>
<tr>
<td>Preschool</td>
<td>3-5</td>
<td>Initiative vs. Guilt</td>
</tr>
<tr>
<td>School Age</td>
<td>6-11</td>
<td>Industry vs. Inferiority*</td>
</tr>
<tr>
<td>Adolescence</td>
<td>12-20</td>
<td>Identity vs. Role Confusion*</td>
</tr>
<tr>
<td>Young Adults</td>
<td>Mid-20s</td>
<td>Intimacy vs. Isolation</td>
</tr>
<tr>
<td>Adulthood</td>
<td>25-60</td>
<td>Generativity vs. Stagnation</td>
</tr>
<tr>
<td>Old Age</td>
<td>60+</td>
<td>Ego Integrity vs. Despair</td>
</tr>
</tbody>
</table>

* Dr. K. A. Korb
  University of Jos
Stage 1:
Trust vs. Mistrust

- Newborns cannot meet their own needs
  - Have to trust that their mother meets their needs
- **Positive Resolution:** Trust in the world based on basic needs being met
- **Parents’ Role:** Provide warmth and responsiveness to child’s needs to foster a secure attachment

**Age:** 0-1 years
**Primary Event:** Feeding

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Stage 4:
Industry vs. Inferiority

- **Industry:** Doing things that others in society value
- Successful experiences give sense of industry, competence, and mastery
  - Unsuccessful experiences leads to feelings of inadequacy, inferiority, and no self-worth
- **Positive Resolution:** Productive work and understanding of progress
- **Parents’ and Teachers’ Role:** Help pupils successfully participate in activities

**Age:** 6-11 years
**Primary Event:** School
Stage 5: Identity vs. Role Confusion

- **Identity**: Integrated sense of self
  - Answering: *Who am I?*
  - Integrate beliefs in career, religion, politics, life purpose, family, etc.
- **Identity crisis** is the most significant conflict
- **Role confusion**: Unable to integrate beliefs, leaving a split personality
- **Positive Resolution**: Strong sense of identity and plans for the future
- **Parents' and Teachers' Role**: Help the pupil learn about options for their identity

Age: 12-20 years
Primary Event: Peer Relationships

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**James Marcia’s Identity States**

<table>
<thead>
<tr>
<th>Searching for Identity?</th>
<th>Committed to Identity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>Identity Achievement*</td>
</tr>
<tr>
<td></td>
<td>Identity Moratorium</td>
</tr>
<tr>
<td>No</td>
<td>Identity Foreclosure</td>
</tr>
<tr>
<td></td>
<td>Identity Diffusion</td>
</tr>
</tbody>
</table>

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Supporting Social Development

- Be aware of the crisis that your students are facing
- Encourage your students toward a positive resolution of the crisis
  - **Industry vs. Inferiority**: Provide support and encouragement so students are successful in learning
  - **Identity vs. Role Confusion**: Provide opportunities for students to learn about potential careers
    - Help students think about how what they are learning relates to their beliefs

Types of Development: Intellectual

<table>
<thead>
<tr>
<th>Piaget’s Stages of Development</th>
<th>Estimated Age** (in years)</th>
<th>Key Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensorimotor</td>
<td>0-2</td>
<td>Thinks through senses</td>
</tr>
<tr>
<td>Pre-Operational</td>
<td>2-7</td>
<td>Can use mental symbols; thinks in only one direction</td>
</tr>
<tr>
<td>Concrete Operations</td>
<td>7-11</td>
<td>Can perform mental actions on objects if the objects are present</td>
</tr>
<tr>
<td>Formal Operations</td>
<td>11+</td>
<td>Thinks abstractly</td>
</tr>
</tbody>
</table>
Sensorimotor Stage

- **Sensorimotor**: Understand the environment from physical actions
  - Infants initially interact with the environment through their five senses

Pre-Operational Stage

- **Pre-Operations**: Use symbols to represent objects and events
  - Mental symbols: Words, numbers, imagination
- **Thinks in one dimension**: Focus only on one dimension of a problem
Pre-Operational Stage

Concrete Operational Stage

- **Mental operation**: Mental action on an object or event
  - Mathematical operations, science experiments
- **Concrete Operations**: Perform mental operations on concrete objects
- **Conservation**: Physical properties of an object stay the same despite superficial changes in appearance
  - Students must successfully solve the conservation tasks to be in the concrete operations stage
Formal Operational Stage

- **Formal operations**: Mental operations are not limited to concrete objects
  - Pupils can think abstractly about objects or events that have not happened
    - What would have happened if the British had not colonized Nigeria?
  - Pupils can plan a systematic approach to solving a problem
    - Why is the motorbike not working?

Piaget’s Stages of Development

- Piaget believed that teachers can learn as much from students’ incorrect answers as from their correct answers

  19
  + 32
  41
Supporting Intellectual Development

- Match teaching strategies to students’ cognitive stage
  - Concrete Operational: Provide concrete objects for students to learn from
  - Formal Operations: Ask students deep questions to think about the lesson at hand
    - Teach students how to engage in logical thinking
- At all levels of teaching, provide concrete examples to represent difficult concepts
  - Tell stories to demonstrate concepts
  - Use analogies
  - Ask students for their relevant experiences
  - Ask students questions beyond what you have directly taught to develop logical thinking

Revision

- What is the difference between maturation and development?
- How can you support your students’ social development? (Erikson’s theory)
- Describe Piaget’s four stages of cognitive development.
- What are strategies that you can use to support your students’ intellectual development?