

MATURATION AND DEVELOPMENT

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Overview

- Maturation and Development
- Motivation
- Memory and Forgetting

Learning Goals

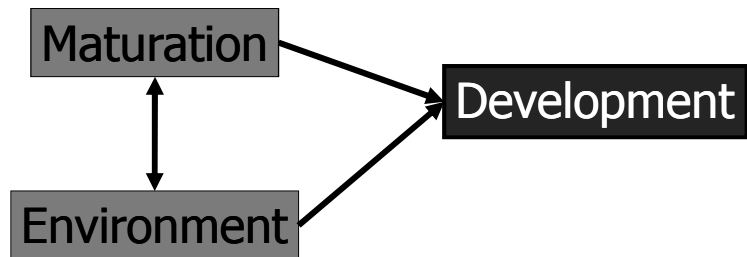
- Differentiate between Maturation and Development
- Understand basic principles of physical, social, and intellectual development so you can teach in a way that supports students' development.

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

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Development



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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

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Types of Development: Physical Maturation

- **Gross motor skills:** Large movements
 - ▣ Lay, Crawl, Walk, Run
- **Fine motor skills:** Coordination of small muscle movements
 - ▣ Writing
 - ▣ Drawing

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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

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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

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Erikson's Stages of Psychosocial Development

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

Stage 1: Trust vs. Mistrust

Age: 0-1 years
Primary Event: Feeding

- 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

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Stage 4: Industry vs. Inferiority

Age: 6-11 years
Primary Event: School

- **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

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Stage 5:

Age: 12-20 years

Primary Event: Peer Relationships

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

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James Marcia's Identity States

		Committed to Identity?	
		Yes	No
Searching for Identity?	Yes	Identity Achievement*	Identity Moratorium
	No	Identity Foreclosure	Identity Diffusion

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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

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Types of Development: Intellectual

Piaget's Stages of Development		
	Estimated Age** (in years)	Key Characteristic
Sensorimotor	0-2	Thinks through senses
Pre-Operational	2-7	Can use mental symbols; thinks in only one direction
Concrete Operations	7-11	Can perform mental actions on objects if the objects are present
Formal Operations	11+	Thinks abstractly

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Sensorimotor Stage

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

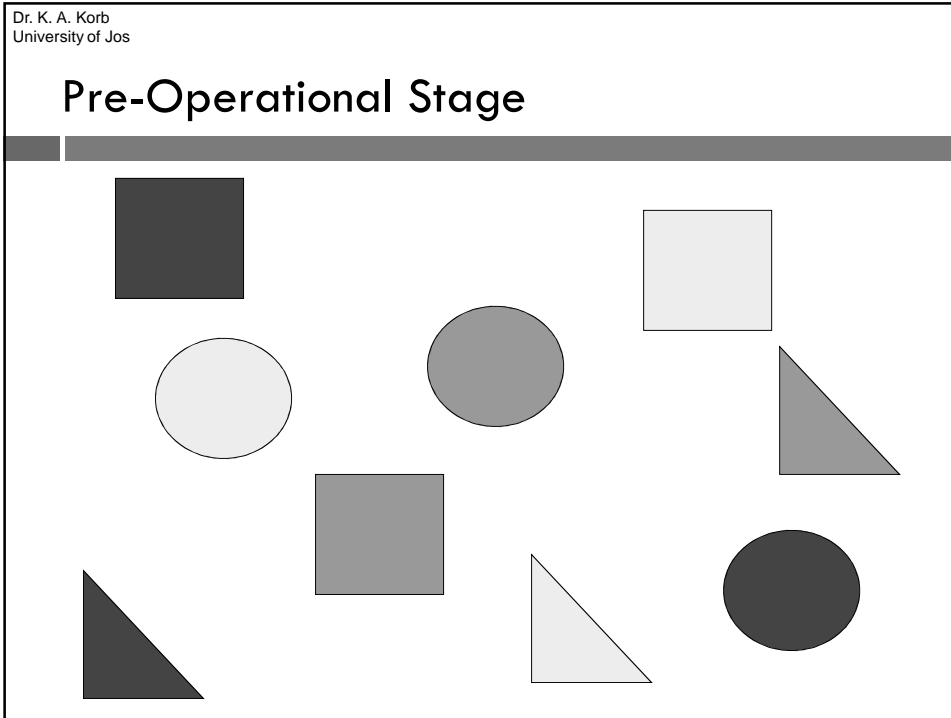
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Pre-Operational Stage

- **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

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Pre-Operational Stage



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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

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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?

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Piaget's Stages of Development

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

$$\begin{array}{r} 19 \\ + 32 \\ \hline 41 \end{array}$$

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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

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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?