

Motor Development: A Theoretical Model

(Chapter 3)

PED 201
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Descriptive Theories

- What people are typically like at particular age periods.
- The focus is on the products of development.

Descriptive Theories

View motor development as a product that:

- Goes from simple to complex.
- Occurs sequentially.

Descriptive Theories

View motor development as a product that:

- Varies between individuals (rate and extent).
- Requires that a person is proficient in basic skill before one can move to more complex skill.

Explanatory Theories

View development as a process that is:

- Discontinuous
- Self-organizing
- multifaceted

The process of MD reveals itself
primarily through...

...?

Changes in movement behavior!

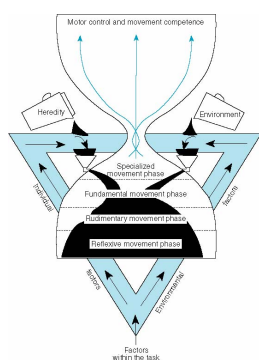
Observation of both process and
product.

- Positive factors (“affordances”)
- Negative factors (“constraints”)

...Occurring within the movement task, the biology of the individual, and the conditions of the learning environment

The Triangulated Hourglass Model (figure 3.2)

- This is not a complete theory.
- This model helps to conceptualize the products and processes of motor development.
- It is both descriptive and explanatory.



Observable Movement

- Stabilizing Movements
- Locomotor Movements
- Manipulative Movements

Stability = Gaining & maintaining equilibrium in relation to the force of gravity.

Locomotor = Change in location of the body relative to a fixed point on the surface of the environment.

Manipulative = Imparting force to, or receiving force from, some object.

As a Discontinuous Process, Motor Development Is Controlled by The:

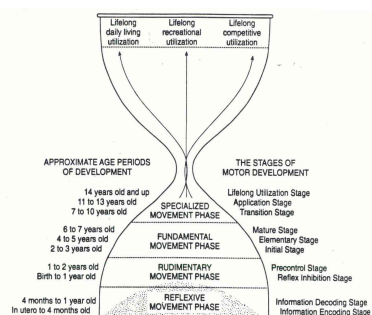
- Requirements of the movement task
- Biology of the individual
- Conditions of the learning environment

Phase/stage Theory Views Motor Development As a Product That:

- Progresses from simple to complex
- Is sequential and orderly in nature
- Builds skill upon skill
- Requires proficiency in basic skills prior to using them as complex skill
- Varies in rate and extent from person to person

Phases of the Model

- Reflexive Movement
- Rudimentary Movement
- Fundamental Movement
- Specialized Movement



Reflexive Movement Phase

- Reflexes are involuntary reactions of the body to various stimuli.
- Reflexes are subcortical.
- Reflexes are the primary information gathering device for storage in the cortex.

Types of Reflexes

- *Primitive reflexes* = nourishment & seeking protection.
- Some reflexes reflect later voluntary movements = *postural reflexes*.

Stages of Reflexes

- In utero to 4 months - information encoding stage
- 4 months to 1 year old - information decoding stage

Rudimentary Movement Phase

- First forms of voluntary movement.
- Movements of the head, neck, & trunk muscles.
- Reaching, grasping, & releasing.
- Creeping, crawling, & walking.

Two Stages

- Reflex inhibition stage - birth to 1 year old
- Precontrol stage - 1 to 2 years of age

Fundamental Movement Phase

- A time when young children are exploring and experimenting with the movement capabilities of their bodies.

Fundamental Movement Skills

- Children begin to learn to respond with motor control and competence to a variety of stimuli.
- These skills develop as a result of maturation but the environment plays an important role in the extent that these skills are developed.

Initial Stage - the first goal orientated attempts at performing a fundamental movement pattern. (2 to 3 years)

Emerging Elementary Stages - greater control and better rhythmical coordination of fundamental movements. (3 to 5 years)

Proficient Stage - mechanically efficient, coordinated, and controlled performances. (5 to 6 years)

Specialized Movement Phase

- Sport related phase, movement becomes a “tool” that is applied in a variety of specialized movement activities.

- **Transition Stage** - The individual begins to combine and apply fundamental movement skills to the performance of sport related skills. (7 to 10 years)
- **Application Stage** - Increased cognitive sophistication + a broadened base of experiences, the individual makes decisions about the types of activities she/he decides to participate in. (11 to 13 years)
- **Lifelong Utilization Stage** - The individual's decision to participate in a limited number of movement activities over a number of years. (14 years old & up)
