

# Chapter 8 motor behavior



**ASSIGN  
BUSTER**

Define motor behavior the study of how motor skills are learned, controlled and developed to assist people as they practice and experience physical activity Motor behavior guides us in:- providing better situations for learning and practice

- understanding why some cues and feedback are better than others What are the goals of motor behavior? 1. to understand how motor skills are learned
- 2. to understand how motor skills are controlled
- 3. to understand how the learning and control of motor skills change across the life span Subdisciplines of motor behavior motor learning, motor control and motor development What are the goals of motor learning?- To explain how processes such as feedback and practice improve the learning and performance of motor skills
- To explain how response selection and response execution become more efficient and effective What are the goals of motor control?- To analyze the mechanisms of response selection and response execution control the body's movement
- To explain how environmental and individual factors affect the mechanisms of response selection and response execution What are the goals of motor development?- To explain how motor learning and control improve childhood and adolescence
- To explain how motor learning and control deteriorate with aging Examples of motor behavior beyond sports- babies learning to use fork and spoon
- dentists learning to control the drill while looking in a mirror
- surgeons controlling a scalpel
- children learning to ride a bike

- pilots learning to control an airplane
  - children learning to control a pencil for writing
- 5 themes that have persisted over the years in motor behavior research
1. knowledge of results (feedback)
  2. distribution of practice
  3. transfer of training
  4. retention
  5. individual difference
- Glassow, Rarick, and Espenschade's research focused on... how children acquired motor skills:
- formation of movement patterns
  - effect of growth on motor performance
- Who was Father of Motor Behavior and what was his theory? Franklin Henry, Memory Drum Theory stated that reaction time was slower complex movements because those movements took more planning time.
- 1960s History of motor behavior from 1970s to present-
- The influence of growth and maturation on motor performance
  - Developmental patterns of fundamental movements
  - Information Processing Theory
  - The study of motor learning and control in children
- Describe the different types of motor behavior research studies.
- Between Group: different treatment/intervention; test on same task
  - Within Group: same, multiple treatments; test on same task
  - Descriptive: no treatment, participants are measured or observed
- Advantages and disadvantages of novel learning tasks in early stages of learning-
- allows to study improvement and have helped us understand a great deal about how movements are learned
  - However, outcome of movement (product) is studied rather than nature of movement (process)

- NOT helpful in researching PA or sport tasks in which performers have had thousands of trials  
 Learning = retention and transfer  
 Transfer = doing slightly different version of the task  
 2 important variable for motor learning  
 practice and feedback  
 Correct practice-- improves performance and supports learning.

Before practice:

- goal setting
- instructions
- demonstrations
- mental practice

During practice:

- scheduling of practice
- context of practice  
 Feedback  
 Goal: helps performers detect and correct own errors

Intrinsic- information obtained by self

Extrinsic- information provided by outside source (teacher, coach)  
 Knowledge of Results vs. Knowledge of Performance

Which would be more helpful for novice or expert? Novice- KoP

Expert- KoR  
 What is the goal of motor control?- to reduce role of decision-making centers in brain once movement has been initiated to produce things faster.  
 Summary of Motor Control  
 Brain --> CNS --> Muscle -->

Movement  
 Motor Programs- proposed memory mechanisms that allow movements to be controlled

- motor programs become more automatic as they are developed, allowing the performer to concentrate on the use of the movement in performance situations.
- Goal of developmental motor learning and control- to understand

skill acquisition across the life span continuous vs discrete- continuous movements

- stopped motion in movement topics in developmental motor learning and control- Developmental changes in the mechanics of movement

- Life span development

- Experience

- Changing neuromuscular systems across the life span two principles of developmental motor learning and control- children are not equal to mini adults

- children are more alike than different ON CHAPTER 8 MOTOR BEHAVIOR SPECIFICALLY FOR YOU FOR ONLY \$13.90/PAGE Order Now