

Theory of Sport Training

Basic Principles

Lesson 8

Coordinative abilities

Coordination

What is it?

Coordination

- General quality to manage and control the movement
- **Farfel(1975):** the ability to realize simple or complex integrative movements fast and accurately during steady or changing conditions and the ability to learn new skills fast.

Coordination

From point of biomechanics one of the universal principles was:

Mastering the many degrees of freedom involved in the movement.

Motor learning

- **Cognitive Phase (generalization)**
- **Associative Phase (differentiation)**
- **Autonomous Phase (automation)**
- **Creative coordination**

Skills

The abilities to realize the movement, which is learned during process of motor learning

Precondition of CA

- Good state of central and peripheral neural system.
- Good state and function of senses - visual, kinaesthetic, auditory
- Good state of muscular system
- Good connection of neural-muscular system
- State of psychological processes

Quality of coordination we can observe

- **As the fast and correct or appropriate reaction to the stimulus**
- **As an ability to take up the right position, posture of all body**
- **Coordination of smaller parts of body, and their integration to the harmonized complex movement**
- **In the better and faster learning of new movement in short time and in good quality**
- **In the adaptation to the new and changing inner or outer conditions during movement**
- **In the choice of the right movement programmes and the economy realization**

Coordination

- General

The ability realize very effectively various skills without sport specialization

- Specific

The ability of effective and intensive realization various specific movements, technique of chosen sports.

Partial coordinative abilities

- Balance
- Kinaesthetic differentiation
- Spatial orientation
- Reaction
- Rhythm
- Synchronization of movement
- Movement adequacy
- Agility

Development of coordination

- Age
- Frequency
- Structure of training unit
- Fatigue
- Variability, diversity,
- versatility

The groups of exercises for CA development

- Activity of single parts of body (mirror movement, asymmetric..)
- Movement activity in various environment
- Activity with exclusion of senses
- Activity of couples or more athletes in group
- Activity to various stimulus, signals
- Movement activity in various combinations

Basic exercises

- Acrobatic exercises, gymnastic exercises
- Exercises with sports gear,
- exercise in another environment – water
- ABC from another sports – Games, athletics
- Exercises with hurdles
- Combative and small games
- Throws,
- Carry some gear, equipment, load