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# Methodological Aspects Regarding the Development of Coordinative Abilities in Dance Sport

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#### Abstract

Generally speaking, coordinative abilities are the abilities necessary to optimally manage situations requiring fast and rational action, being very important in accident prevention. Coordinative abilities are the basis for adequate sensorial-motor learning.

Specialized literature deals with **general and special coordinative abilities.** General coordinative abilities are the result of multifaceted training in various motor actions or sports branches. Therefore they are manifest in different areas of daily life by the fact that certain motor situations are treated creatively (Harre, Deltow, Ritter, 1984, quoted in Tudor, 1999). Special coordinative abilities are mostly developed in disciplines characterized by rich technical variety.

Starting from the premise that dance is a complex sport and its practice at the highest level presupposes the optimal development of psychomotor skills, the present study aims at evincing the importance of accurately mastering the components of coordinative abilities and the methodological aspects at the basis of their development in dance sport.

**Keywords**: coordinative abilities, dance sport, training, physical preparation

# Introduction

In our attempt at guiding the athletes towards developing their coordinative abilities, it is crucial to know the *factors* conditioning this component of the motor ability.

Synthesizing several points of view (Dragnea and, Bota, 1999; Tudor, 1999), one may conclude that these coordinative abilities depend on a series of *compound factors*:

- mobility of fundamental cortical processes or ability to rapidly alternate cortical excitation and inhibition processes;
  - speed of transmitting nervous impulses and quality of muscle innervation;
  - functional state of analysers receiving visual, auditory, tactile, kinesthetic information;

- value of energy resources in the body, especially at muscle level;
- development level of the other conditional and intermediary abilities: as stated previously, a certain degree of strength, speed or endurance development is required, so that motor adaptation is performed fast and efficiently;
- motor experience, volume and complexity of the motor knowledge the subject possesses; this motor repertoire, once acquired, determines the action scheme which triggers, at least partially, a proper answer through automated models;
- ability to foresee further development of the movement and the subsequent use of the optimal technical procedures;
- ability to foresee the circumstances of the next movement, based on reflex responses, acquired through constant repetition;
  - most accurate representation of the new movements to be acquired;
  - quality of long-term and short-term memory;
  - quality of cognitive processes: (fast, creative) thinking, focus, etc.;
  - age degenerative processes also occur at motor skill level with age;
  - gender coordination is better by 5-10% in women as compared to men;
  - other factors: alcohol, tobacco, unhealthy lifestyle have a negative impact on the analysors' ability to register information, and consequently on the functional capacity of the neuro-muscular system.

#### 1. Methodological aspects regarding the development of coordinative abilities

Being an ability with a high degree of genetic determination, the "trainability" chances are lower.

Although the forms of manifestation are influenced by the maturation processes, it is considered that the optimal age to act efficiently in view of their development is between 7 and 10 years, when the cognitive and motor abilities are better related. One may draw the conclusion that the perfectly timed intervention upon the coordinative abilities is essential for the subsequent motor development and the athletes' performance reserve, as a superior development will definitely leave a mark on the ability to acquire, consolidate and improve new motor acts.

**Our purpose** in this paper is to approach important theoretical and methodological issues in optimizing the coordination abilities of the practitioners of dance sport, so that the information provided to be helpful for those interested and involved in the complex process of training specific to the dance sport.

Given the complex structure of coordinative abilities, certain authors consider that one may not highlight methodological processes and special exercises, and that "any exercise is good to develop skill" (Mogoş and Mitra – 1980), while other authors claim that coordinative abilities have regular practice as a main development method.

According to Tudor (1999), the physical exercise used to develop coordinative abilities should meet the following requirements:

- high degree of difficulty, requiring that the dancer should possess a high degree of general and segmental coordination, balance, the sense of rhythm and pace, spontaneity, creativity;
- in the process of coordinative abilities one must avoid the exercise triggering the athletes' tenseness;
- superior expression of the other motor skills.

Gagea (2002) considers that the training programme should include training sessions focusing on topics especially meant to develop the coordinative abilities. "By controlled repetition, the form of the movement is getting closer and closer to what is conventionally called well controlled movement. In fact it is the sequel to the phenomenon of learning through stereotypy." The process of coordination improvement should be individualized, as individuals progress differently when faced with the same volume, and volume increase does not result in a significant coordination improvement.

In specialised literature there are two types of methods (general and specific) used in order to develop coordinative

Weineck (1983) adds to these methods the formation methods of motor representation, considering that the latter is at the basis of learning how to perform motor acts. Depending on age, the ability to make intellectual effort and the level of development of coordinative abilities, the author proposes two methods considered to produce very good results:

### 1. the method of visual information

It is mainly used for beginners, for whom the representation of the motor act is essentially a visual cliché. On the other hand, with advanced athletes/students, this method only covers the kinaesthetic information to a reduced extent.

#### 2. the method of verbal information

This method may precede, follow and/or be used simultaneously with the visual method. It clarifies the motor act to be performed.

The two methods complement each other, their combined use being the optimal version to the best comprehension of the motor act in general.

# General methods of improving the coordinative abilities

Harre (1979) proposes the following methods for the development of coordinative abilities:

#### variation of movement performance

It is achieved by either combining partial stages of a motor sequence, or performing only certain sequences with rhythm variation.

#### variation of external circumstances

It focuses on variations of the environmental circumstances and dimensions, or the devices used in performance, or the space.

#### - combination of automated motor acquisitions

It presupposes the successive or simultaneous connection of the motor acquisitions. The method is applicable only if the acquisitions are automated, otherwise performance mistakes may occur.

### - timed practice

It refers to performing well-known exercises as fast as possible, or with maximum and minimum time-limits to be recorded.

#### - information variation

It presupposes the extension or reduction of the information received by an athlete/student, according to environmental alterations. An increase of the number of pieces of information received will increase his control ability. Optimal results may be obtained by obstructing one of the pieces of information received (e.g. visual), or excluding the acoustic information.

#### - exercises performed in a state of fatigue

After effort, the athlete is required to perform a series of actions with a high degree of difficulty from the cooperation point of view. Taking into account that the exercises used have to be well mastered in point of technical execution, this method cannot be used in the stages of technique modification.

- exercises aimed at imitating pre-established motor sequences
- exercises on either side

These two final methods allow for numerous variations and may be interconnected. Their choice is imposed by the nature of the coordination ability to be developed, and results are obtained only if the stimuli are continuously varied.

#### Specific methods of improving coordinative abilities (Saulea (Aducovschi), 2005)

# Methods of developing the ability to combine and couple movements:

- partial or total progressive connection between two skills, with focus on certain components;
- executions of segmental coordination, between the upper and the lower limbs;
- progressive development of laterality, exploiting the asymmetrical movements of increasing difficulty;
- combining skills with various endurance;
- structures with the same steps in different combinations.

# Methods of developing the ability of spatial-temporal orientation:

- observing the other dancers, in movement and statically;
- moving in pre-established spaces and distances;
- using spaces different from standard spaces;
- using unusual positions, situations and movements;
- the possibility to observe and self-observe through video devices and/ or mirrors.

# Methods of developing the ability of kinaesthetic differentiation:

- all the exercises with progressive increase in the level of accuracy;
- pair work, performing grips with the possibility to react to the movement of the partner- stimulus-response.

# Methods of developing the balance ability:

- all the exercises stimulating the balance of the dancer's own body and the partner's body;
- exercises of maintaining positions on musical background, with pre-established time;
- study at the wall bar (classic dance and adapted elements);
- study from classic and modern dance in the centre.

#### Methods of developing the ability of motor response:

- situations imposing the response to visual, auditory, tactile, kinaesthetic stimuli, in a complex progressive form;
- practice by imitation or in the mirror, improvisations.

### Methods of developing the ability to transform movement:

- creating situations in which it is necessary to resort to unpredictable modifications of actions (mistakes made by the partners, bumping into the other pairs on the dance floor).

## Methods of developing the pace-finding ability (the sense of rhythm):

- rhythm variations;
- timed performance with music and then without music;
- including accents into the performance rhythm.

#### **Conclusions**

Dance sport is conditioned by coordinative abilities, each component having a certain weight in the specificity of this sporting event. By its components, coordinative abilities are in direct relation to dance sport.

As the coordinative abilities are determining factors in the level of expression (performance) of dance sport, it is essential to include them in the training programme, and the means used should have the weight and quality required by the training stage when these abilities need developing.

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# **Learning Methodology In The Basketball At The Beginning Level**

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### Abstract

In literature, there are several attempts of domestic and foreign specialists to develop different methodologies for learning basketball at all levels. The vast majority, in fact, are dedicated for learning technical elements and techniques with the ball, and few of them are dedicated to learning ball-free play. This article is intended to teach beginners basketball game by applying an experimental methodology designed to increase level of quality learning ball-free play, such as movements, these being expressed by walking, running, jumping, stopping and pivoting.

Keywords: Basketball, learning, methodology, trips, beginners.

#### Introduction

At present, basketball is one of the most popular games among the youth and not accidentally the number of people practicing this sport is constantly growing.

There are several institutions that are concerned with preparing basketball players for performance, such as basketball specialized schools, private and state sports clubs, different performance centers, etc. However, there is no common opinion amongst the specialists on the methodology of basketball players training, in general, and on some particular aspects, in particular.