

# EXERCISES WITH HAND APPARATUS IN ADAPTED PHYSICAL ACTIVITIES

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## Abstract

During the latest years, social policies have promoted new strategies for the activity optimization in the special education field. The more and more extended use of the different types of motor activities and their approach under a more complex perspective require the use of some acting systems where the motor and psychomotor development aspects interpenetrate with the social, artistic and cultural education ones. From this angle, we thought it would be opportune to synthesize the advantages brought by the education of motor control capacities, by using some hand apparatus. We took into consideration the fact that the aspects related to the forming of some skills and abilities engage and develop the activity of the sensorial-perceptive factors and, implicitly, coordination, by stimulating the creative-imaginative and socialization sides, so important to special education.

Exercises with hand apparatus may turn into a “play”, during which the child makes friends with his partners, knows and controls himself. The ludic concern becomes thus an activity with many formative, educative and corrective valences.

**Key-words:** motricity, coordination, sensorial plans

## The approached topics

From the socio-psycho-pedagogic standpoint, children with disabilities represent a social category that draws more and more the attention of the specialists in physical education.

During the latest years, social policies have promoted the development of some strategies for the activity optimization in the special education field, the didactic and practical approaches being equally oriented towards finalities meant both to correct and develop the motor capacities adapted to each disability.

## Advantages of using the exercises with hand apparatus

When we want to have control over an object, to play with it, we carry on an activity both useful and attractive. This activity may become therapeutic, being able to induce positivity, due to the fact that the performer develops a self-confidence feeling (M Guillon, J.-M. Barbin, 1991).

Exercises with hand apparatus represent, for any child, a “play” in which the apparatus becomes his friend. Through this play, he learns to have a relationship with the apparatus and to use it to his benefit.

That is why we can assert that the “play” with different apparatus represent an activity with

Their interest has been guided towards the whole range of theoretical, practical-methodical and competition activities (V. Marcu, 2007, S. Teodorescu, A. Bota, M. Stanescu, , 2007) .

From this perspective, we think that exercises with hand apparatus represent an activity with many formative, educative and corrective valences, which is part of the inclusive education interest area. And this because, through the means specificity and accessibility, the acting systems are applicable to all the different forms of disabilities or incapacities, being adaptable both to the dysfunctional needs and to those related to age and motor experience.

recreational and creative-imaginative valences, which also influences the subject’s psycho-affective side.

Another advantage provided by the exercises and the movement plays with hand apparatus is that they are assigned to a wide range of abilities, with many possibilities of being transferred to the current activity, abilities easy to adapt both to the development/ education/ forming requirements and to the correction ones.

Thus, in the context of some attractive-ludic activities, these exercises provide the child with skills and capacities which engage and develop the activity of the sensorial-perceptive factors, the essentially aimed aspects being the plural sensorial information: visual, tactile, kinesthetic, vestibular, spatial and temporal ones.

The presented aspect is even more relevant as most of the different forms of disabilities are known to determine the perturbation of some physiological, anatomic or psychical structures or functions. From the motricity perspective, one of the first capacities affected by these dysfunctions is coordination. But, from the socio-professional integration point of view, the coordination development represents an imperative desideratum (M.Guillon, J.-M., Barbin, 1991).

In this sense, we want to remind the fact that within the constellation of motor and psychomotor capacities, the coordinative components are the unique aspects which don't have developmental limits or barriers and don't oppose to other capacities. No matter how much they are developed, they are beneficial to the individual's life (J.Weineck 1992).

If these influences are "prescribed" in the normal life, their presence is even more important in the activities destined to the persons with special educative needs.

## Utilitarian applications

The sports discipline providing an extremely wide range of systems for the hand apparatus manipulation is rhythmic gymnastics. Its characteristic is the use of some apparatus with various forms and constructions, allowing lots of manipulation modalities.

They provide the performers an infinity of opportunities and lead to the development of a multitude of motor capacities, particularly related to coordination.

Officially, rhythmic gymnastics uses two categories of hand apparatus:

- the official ones - represented by the 5 competition hand apparatus acknowledged by the Gymnastics International Federation: rope, hoop, ball, clubs and ribbon;
- the demonstrative ones - different adaptations of the official hand apparatus: flags, scarves, batons, umbrellas, fans, garlands etc.

*Fig. no. 1. Presentation of the official hand apparatus in rhythmic gymnastics*



**Rope** – an ambidextrous apparatus providing a multitude of possibilities for the development of coordination, mainly of the plural segmental one (coordination arms - legs). Its history can be found in children's usual ludic activity.



**Hoop** – it became popular in the first half of the 20<sup>th</sup> century, when it was officially used in a demonstration occasioned by the 1936 Olympic Games. This apparatus is characterized by a large surface, fact that renders more difficult the control over it.



**Ball** – the apparatus, used in physical education since the 9<sup>th</sup> century, is an important presence in children's play.



**Clubs** – a double apparatus that strongly engages the coordination components under ambidexterity conditions. From a historical perspective, they have been used in rehabilitation gymnastics since the end of the 20<sup>th</sup> century.



**Ribbon** – a spectacular apparatus, due to the described spatial shapes. In the bamboo baton variant, it represented a traditional apparatus in the Chinese dances.

The 5 official hand apparatus represent a quintessence of all the acting possibilities and it can also be found in the demonstrative ones. Thus, the flag or the baton manipulation is almost similar to that of the clubs. Scarves manipulated by seizing one of their ends or their short side can describe shapes similar to those described by the ribbons (spirals, windings etc.).

The possibility of transferring the manipulation techniques from one apparatus to another develops coordination, but also imagination and creativity.

The teaching methods have, as a main objective, to form the capacity of manipulating the hand apparatus in various ways. To this purpose, the pedagogic approach focuses on the following types of capacities:

- the correct grip of each hand apparatus, by taking into account its form and dimension;
- the capacity of easily manipulating it, on various plans and directions, under permanent contact conditions;
- the capacity of easily manipulating it, on various plans and directions, under conditions of momentary loss of the physical contact with it (Macovei, S., 2007).

The learning of different manipulation modalities relies on three acting schemes (Macovei, S., 1999):

**G** = grip; **A.C.A.** = actions performed in contact with the apparatus; **A.L.C.A.** = actions performed by losing contact with the apparatus.

The assimilation of the three acting schemes is determinant when we aim at forming the capacity of controlling the apparatus path and at fulfilling movement projects as various and diversified as possible. The relationship settled between the performer and the apparatus might be seen as a dialogue that develops from one movement to the other.

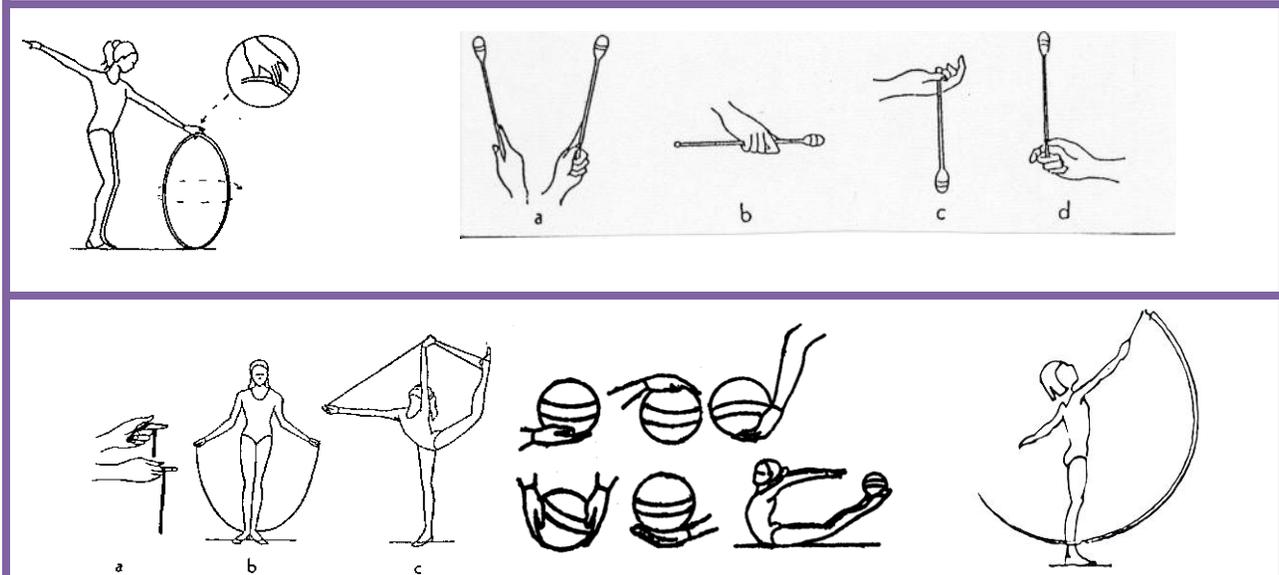
For each apparatus, it is essential to pass through the three acting schemes. Their correct learning and the assimilation of the main actions specific to each apparatus contribute to the coordination development and to the training of the sensorial-perceptive plans.

As for the sensorial information capturing, each acting scheme has both common and differentiated aspects, as follows:

**The grip** (fig. no. 2 ) represents the modality of seizing the respective apparatus, the action by which the apparatus is fixed in a certain position or/ and travels on different movement plans, directions and senses.

During the grips, the sensorial information capturing is predominantly tactile, by aiming thus at identifying the forms in their relation to the contact surfaces.

**Fig. no. 2. Examples of grips**



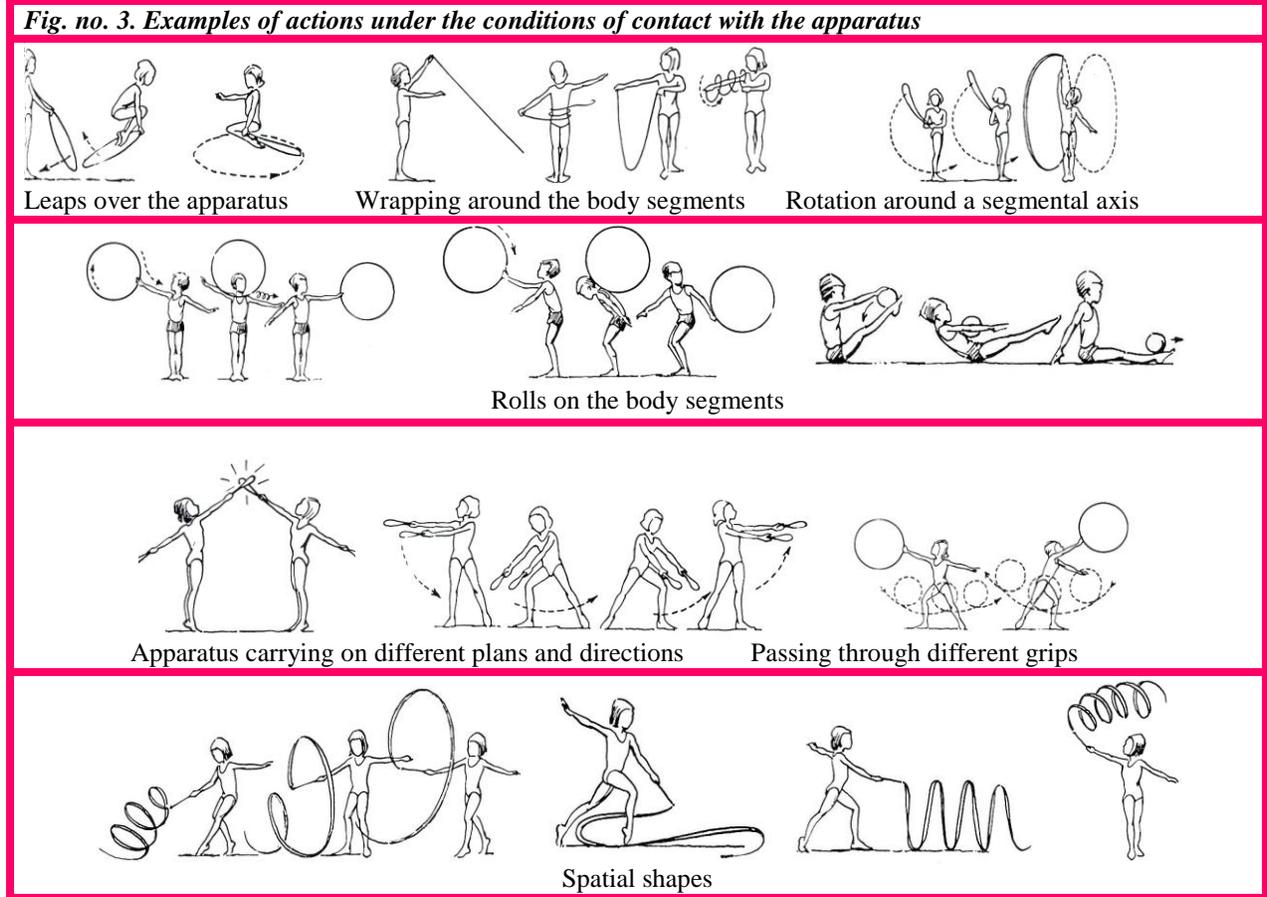
**The actions performed in contact with the apparatus** involve the apparatus autonomous travels, it becoming the spatial prolongation of the segment manipulating it.

The sensorial information capturing is mainly tactile-kinesthetic and has major implications upon the spatial perceptions.

The various action learning leads to the differentiation of the rotation senses, to the perception of the corporal plans in relation to the apparatus, to the execution, repetition and acceleration speed evaluation etc.

**Action types** (fig. no. 3):

- balance movements (arched, circled, eight-shaped) – possible with all the apparatus;
- apparatus turn around a segmental axis (hoop, rope, baton);
- apparatus rolls on different body parts (hoop, ball, clubs, baton);
- apparatus carrying on different plans and directions, passing through different grips etc. (possible with all the apparatus);
- shapes described with the apparatus (ribbon, rope, scarves etc.).



**The actions performed by losing contact with the apparatus** suppose the apparatus spatial projection on a certain path, followed by its regaining, either individually or by a partner. The relation body-apparatus becomes a following-up one, in which the performer must appreciate distances,

depths, duration of the contact loss and anticipate the apparatus regaining moment.

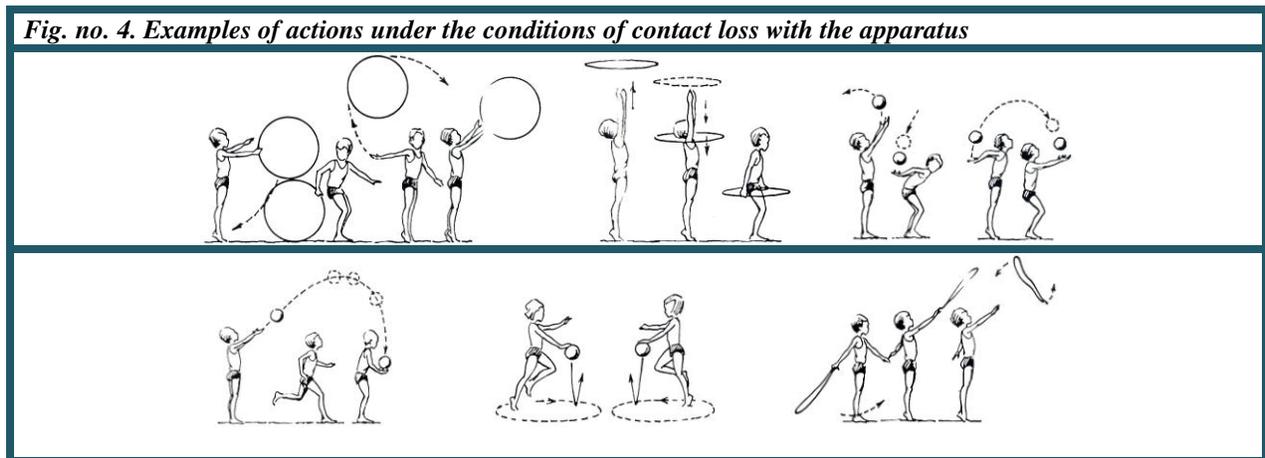
The information capturing is complex: tactile - at the impetus moment and when regaining the apparatus; visual - when following-up the apparatus path; kinesthetic - all the movement long, the spatial-temporal perceptions being deeply involved in. Simultaneously with the physical contact

loss, it is also possible to lose the visual contact or, at the flight moment or/ and when regaining the apparatus. In this case, the apparatus path remains in the mental representation, being followed-up on the basis of the spatial-temporal perceptions and of the specialized kinesthetic information.

- apparatus bounces on the floor or on the body segments (ball, hoop, clubs);
- rolls on the floor and retro-rolls (ball, hoop and clubs).

Action types (fig. no. 4):

- throws (possible to be performed with all the apparatus);
- small releases with re-grasps (possible to be performed with all the apparatus);



### Conclusions

We think that the use of exercises with hand apparatus is an activity with real educative-formative-corrective valences and that they should become a common practice in special and inclusive education.

Exercises with hand apparatus create a connection between the physical and the mental, between I want and I can, between I perform and I achieve, they providing the child with skills and abilities that engage and develop both the activity of the sensorial-perceptive factors and coordination, in parallel with the stimulation of imagination and creativity. Hand apparatus present a multitude of manipulation possibilities, some of them common, other specific, the exercises representing a “play”, during which the child makes friends with them and with his partners, learns to know and to control himself.

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