



METHODICAL ASPECTS OF LEARNING THE HURDLES RACE TECHNIQUE

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Abstract

Our paper responds is meant to be a tool for improving the methodical aspects of learning the hurdles race technique at children and junior level. Our aim was to elaborate a program that would serve as model for the process and is targeted at children aged 10-12 years old. In order to help them learn how to run over the hurdles we have included in this program several introductory exercises that would help them become familiar with the process of running over the hurdles as well as efficient driving systems in the stage of strengthening the technique of running over hurdles.

The driving systems we are recommending in this paper would lead to a quick and effective learning of this spectacular event in track and field. These systems meet the set targets and include the specific dosage for each exercise and preparation stage. Using helping materials during the training sessions would lead to an increased effectiveness of the means we have used, adding to their structure a special formative value.

Keywords: children 10 to 12 years old, methodical learning, track and field, hurdles

JEL classification: I0, I10

Introduction

In this study we intended to bring to the specialists' attention some modern and effective practical and methodical aspects that form the basis of a quick, correct and effective learning of the process of hurdle clearing.

As a former high-performance athlete and hurdler I had a strong motivation in approaching this topic.

In this paper we intend to elaborate a program that could serve as model for developing the skills needed to learn the hurdles. The program is targeted to children aged between 10 and 12 years old and it includes introductory exercises that would help the children become familiar to clearing the hurdles as well as systems that are useful and effective during the consolidation phase. Our intention is that the driving systems we are forwarding are attractive and that they include playful and competition-targeted elements.

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1. Reference area

Track and field is one of the most widespread sports, therefore its practitioners and fans are all over the world, thus representing a significant attraction point in major worldwide competitions.

In sports terminology, track and field is defined as “a system of exercises taking the form of running, throwing and jumping, in a natural or stylized manner, with the purpose of developing specific physical qualities and of obtaining better results.” It involves running, jumping for height and distance, and throwing for distance using implements of standardized design.

Track and field is a constant, useful and necessary presence in the physical education programs in Romanian education system. It is a great developer of motor qualities, such as speed, so-ordination, endurance, strength. Running, jumping, throwing are skills and abilities that help strengthening the body and health and developing knowledge that are specific to the sports field.

Hurdles are one of the most attractive discipline in track and field competitions. They are true demonstrations of sporty craftsmanship, where speed, flexibility, coordination combine in a harmonious way.

Clearing the hurdles is a sprint but also a technical event where the goal for the hurdler is to do as much running as possible, while doing as little hurdling as possible. The succession of the steps is interrupted by a typical step, the final step before the lead leg rises to clear the hurdle. Hurdlers sprint, clear the hurdles, then resume sprinting as quickly as possible. The key is to maintain momentum while clearing all hurdles, keeping the center of gravity close to normal sprinting position.

Stepping over the hurdle is longer than the sprint step. It is important that the lead leg's knee drives to the hurdle, then the lower leg extends forward until reaching the hurdle's height. Momentum should not be lost during that phase. Clearing the hurdle must be done as quickly as possible. Speed plus technique determine performance in this athletic event.

2. Content

From the very first phases of the learning process it's recommended to use as many helping accessories and materials as possible, such as plastic cones of different shapes and sizes, medical balls, adjustable height hurdles, strings etc. Using such materials represents a necessary and effective method of developing a rhythmical structure of the movements. They also add an important degree of attractiveness to the lessons, moving away from the monotone traditional exercises. They also contribute to lowering the tiredness, as the children focus their attention on their technical to do list. Special attention should be given to the placement and adaptation of the accessories according to the children' level.

Using attractive, various exercises and creating competition scenarios, at individual or team level, also represent an important and effective tool at this level.



2.1. Introductory exercises

It is necessary from the very first lessons that we give a great amount of attention to developing the capacity to have a correct image on the movements to be made. Therefore we forward the following driving systems:

1. – from sitting position, roll back, touch the ground with the toes and return to the hurdling position, with the torso bending forward
2. – positioning for hurdle clearing while sitting. The lead leg in straight forward, while the trail leg is bent in right angle and in line with the hip and the foot is in dorsal flexion
3. – standing up, lean the lead leg on the hurdle, bend the torso and touch the ground with the opposite arm
4. – standing up, lean the trail leg on the hurdle, then bend the torso forward and touch the ground with the opposite arm
5. – jog and then lift up the lead leg, with the knee bent, while pushing forward with the other leg, before bringing it ahead
6. – run over several obstacles with different height positioned at equal distances from one another, on the same course. This helps form a perception of height.

2.2. Exercises aimed at learning the technique

Sprinting over the hurdles will be taught using improvised hurdles, depending on the athlete's biometrical potential. Height of the hurdles as well as the distance between them will be adjusted so that 2-3 rows of hurdles with different distances and height can be placed according to the value groups. After completing the initiation step, you can move to the stage of the basic link, clearing the hurdle.

Learning to step over the hurdle:

- 1.- For the beginning, static exercises will be performed to learn how to clear the hurdle
 2. - Exercises will also be performed to imitate the movement of both the lead foot and the trailer foot, one or two steps ahead, over hurdle positioned against the wall. The motion of the lead leg will start with the kneeling of the knee, followed by the swing of the forefoot with the paw in the dorsal flexion. The trunk bends forward, and the arms execute the movement specific to the hurdle clearing. Dosage: 2 x 10-15 reps
 3. - Standing with support on the arms (on the wall, fixed ladder) to execute the impulse foot drag (trailer) specific to the passing over the hurdle. The height of the hurdle will increase progressively to the extent that the movement is correctly appropriated. Dosage: 2x10-15 repeats
- You can also perform 10 to 15 m walking exercises with the successive imitation of both the lead and trailer foot movements
4. - By walking, analytical passage only of the trailer foot over the hurdle, the lead leg stepping forward outside the hurdle plane. Dosage: 2x6-8 hurdles



5. - Walking, passing only the lead leg over the hurdle, the other foot executing the movement outside the plane of the hurdle. Dosage: 2x6-8 hurdles

6. - Exercises used to learn the technique of running over the hurdles will contain as many walks as possible, easy running, ankle play, and knees up both for the lead foot and for the trailer foot.

7. - Once reinforced, the lead leg and trailer foot technique will continue with global passes across the hurdles at a pace of 5 and 7 paces between them, the height of the obstacles varies between 30-50 cm and the distance between the hurdles between 6 - 8 m. Dosage: 4-6 x 30-40 m hurdles, break between repetitions 3-4 min.

2.3. Exercises targeted at improving the technique

1. Purpose – Developing coordination of driving actions, pace of execution; Learning the stepping movement over the obstacle

1. – Walking by the hurdle, pass the lead leg over the obstacle. There will be 4 to 6 hurdles placed at a distance of 100-120 cm between them. A single step is made between them. Dosage: 2x4-6 hurdles, active pause between repetitions - walking the same distance.

2. – Just as described above, but passing the trail foot above the hurdle. Dosage: 2x4-6 hurdles; Active pause between repetitions - walking the same distance

3. – Walking towards the hurdle, cross the middle of the obstacle with just one step between them. At first, put the hands on the hurdle and get over it. Dosage: 4-6 reps x 5 hurdles; Active pause by performing on-site imitation of the base mechanism

4. – Pass over the hurdles by walking sideways to the right, only the right foot carries successive steps over the fence. The distance between obstacles is 100 - 120 cm. Dosage: 4x2x5 hurdles (4 series for each side).

2. Purpose – Increasing the execution speed and the coordination of motor actions under various conditions

1. – Alternative crossings with right and left foot, two-step rhythm between hurdles, distance between the 8-10 obstacles being 2,00 m. Thus, the movement of the lead leg is executed over hurdles 1,3,5, 7 and the trail foot movement is executed over hurdles 2,4,6,8. Dosage: 4 to 6 x 8 hurdles, active pause on the same distance.

2. – Run one step over 6-8 obstacles just with the lead foot. The distance between hurdles is 2,00 - 2,50 m. Dosage 2-4 repetitions x 6-8 hurdles, pause - walk the same distance.

3. – Running in 5 steps between hurdles, 8-9 m distance between obstacles, global technique. Dosage: 2-3 series with a 2-4 minute break between repetitions



3. Purpose - Improvement of the speed reaction, movement and consolidating the 3 step momentum between hurdles

1. – Running in pairs over 25 m, when the distance to the first hurdle is 6 - 8 m and the distance between hurdles is 6,00 - 6,50 m. Dosage: 2-3 x 25 mg, pause 3-5 min.

2. – Running over 4 fences with a reduced distance (5.50 - 6.50 m) between obstacles, with an emphasis on increasing the execution speed. Dosage: 4-5 reps, pause 3-4 min.

4. Purpose - Development of coordination capacity, mobility and joint flexibility

1.-Walking, pass the trailer foot over the hurdle, the lead steps outside the plane of the hurdle. The distance between two hurdles will be 15,0-1,80 m and will be covered in one step. Dosage: 2x4-6 hurdles, active pause

2.-Idem with the 1st leg for attack. Dosage: 2x4-6 hurdles, active pause, walking the same distance.

3.-Run over 3 small hurdles, 3 steps between obstacles. The distance between hurdles will be 6,00-6,50 m and the distance to the first hurdle, 8,00 - 10,00 m. Dosage: 2-4 series, active break.

4.-Running on 25 m hurdles, 3 steps between obstacles. The distance between the hurdles - 6,00-7,00 m and the distance from the starting line up to the first hurdle, 8 - 10 m.

The training program we proposed in this study includes only the drive systems specific to the hurdles event. In training for athletics for this age group, the training will have a multilateral character, including exercises from the school of running, jumping, throwing and many dynamic games and general physical training exercises. All of these have as their primary purpose the provision of a solid basis for further specialization on a particular category of events.

3. Conclusions

Hurdles are considered to be one of the most technical athletics events. It is imperative to get a great technique highlighted by speed in order to get better results in competitions.

Taking these essential characteristics into account, it is imperative that from the beginning of the training we must insist on the correct technique of clearing the hurdles, which explains the layout of the proposed means of action that we are advancing.

Whether they are part of the introductory, learning or consolidation exercises, the drive systems we recommend in this paper will lead to the rapid and thorough learning of this spectacular athletics event.

The drives systems we propose are subordinated to the goals pursued and are accompanied by appropriate and specific dosages for each exercise and preparation stage.



The use of additional materials during the training sessions or the lessons will lead to an increase in the efficiency of the means used, adding a special formative value to their structure.

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