

## **PLANNED TRAINING IN RELAY RACE RUNNING AS A PART OF SCHOOL CURRICULUM**

*(Professional paper)*

**Rade Stefanović**

*University in Priština, Faculty of Sport and Physical Education,  
Leposavić, Kosovo and Metohia, Serbia*

### **Abstract**

*This work deals with passing a baton “from above (overhand)”, “from below (underhand)” and without passing it from hand to hand (push). The first runner in a relay race carries a baton in his right hand and passes it to the second runner in his left hand, then this runner passes the baton to the third in his right hand and finally the third runner passes the baton to the fourth in his left hand. Crouching starting position with a baton is identical to crouching starting position without it. The first runner carries a baton in his right hand and on the track he holds it with his little finger and his ring finger; while at the same time, on the starting position, he leans against the ground with his index finger, middle finger and his thumb. A baton is held closer to the lower end in order to make more space for receiving the baton by the next runner. After the start, as soon as the right hand with a baton is detached from the ground, it should be kept by all fingers. The outgoing runner stands inside the exchange zone in crouching, half standing or standing start position. For correct start of the outgoing runner, there is a control mark which is positioned on the basis of the speed of runners (about 7 – 8m or 22 – 24feet).*

**Keywords:** *relay race, technique and methods of relay race baton passing, 4 x 100m and 4 x 400m relay races, training of beginners*

### **INTRODUCTION**

Teaching athletics is included in the system of physical education of schoolchildren. Walking, running, jumping and throwing, as well as various special trainings within athletics, are applied in teaching physical education to schoolchildren, depending on their age. Even before starting school, a child, in a way, has a good command of running, jumping, throwing, as well as of natural movements, mostly through everyday playing. The process of training has a task not only to adopt a particular technique or to improve coordination of movements, but also to achieve certain sports and technical results. Besides, what is more important, athletics should form a child's organism, give it versatile preparation and strengthen his health. That positive influence of athletics is explained by the fact that athletics strengthens heart and blood vessels system as well as respiratory system, it develops harmonious musculature, increases mobility of joints and improves neuromuscular coordination.

Athletics within a teaching process should deal with the following tasks:

- To strengthen health;
- To make versatile development of children's organisms

- To enable applicability of acquired knowledge;
- To develop sportsmanship.

In order to realize these tasks, a teacher has to stick to certain didactic principles in his/her work. This group includes the following principles:

- Principle of awareness and activity;
- Principle of visibility;
- Principle of graduality and systematicity
- Principle of permanence, etc.

The above mentioned principles, as we can see, are mostly taken from the theory and practice of school teaching (didactics). They can, with some adaptations, be applied to any school curriculum.

Teaching techniques of relay race should be started only after technique of sprint running has been adopted completely. The basic task of training is that beginners learn to pass a baton in the fastest phase of running. Order of training:

- Creation of idea of a correct technique of passing a baton, by demonstrations, films, posters, photographs, with necessary explanations.
- Various games with carrying different objects.
- Practicing passing a baton in place, while walking, slow running and in full sprint.
- Exercises of passing a baton in pairs on the

30m track. All the exercises are first done on the straight part of a track, and then on the curve.

Sense for quick passing of a baton can be acquired early, with very young children, through various relay races with carrying various objects. After these relay races practice can move further to passing the real baton. Groups should be lined in columns, one next to the other, and pass a baton from right to left hand alternately. With a signal "Stick!", a runner who receives a baton passes it further. Passing a baton is performed only after the outgoing runner, (a runner who receives a baton), has put his/her hand in front of him/her in a position for receiving the baton (picture 1). Right shoulder of the incoming runner should be at the same level with the left shoulder of the outgoing runner (picture 3). This is the case when the baton is passed from the right into the left hand. The reverse takes place if the situation is opposite. While running, exercises are done in the same way, with a difference that groups of two (picture 4), and later of four runners are formed (complete teams). The other possibility is that the first runner holds a few batons in his/her hand and sends them forward constantly. When the baton comes to the fourth runner, he/she puts it on the ground (picture 4d), so that training goes on without stoppage. After doing these exercises in place, and then while running slowly and

later quickly, we start practicing in pairs. Pairs usually practice in positions which they take when running a relay race (the first and the second, the third and the fourth, the second and the third, etc.). Necessary distance for control marks should be defined and measured. Training is performed in full speed on the terrain of 30m.

Process of learning relay race techniques can be conducted only after short distance running techniques are learnt and it consists mostly of teaching beginners to pass the baton successfully with relatively great speed of running. At the beginning it is necessary to use relay games, as a specific form of competition. It is well known that relay games – races stimulate development of responsibility, sportsmanship, sense of belonging to a group, etc. There is maximum stimulation of the nervous system, and there are also fear and stage fright present, falls and dropping the baton happen often and sometimes even giving up.

If we compare relay games and relay races on the athletic tracks, it can be noticed that there are almost the same elements necessary for conducting competition.

Relay games: rules, baton, start, track, finish, more competitors

Relay races: athletic rules, baton, referee, start, athletic track, finish, four competitors

Relay game is a competition, but at lower level than athletic relay race competitions. Actually, the point is in different levels of training, so that it can be said that a relay race is a form of training and competition.

A didactic principle - from simple to more complicated forms of relay games, is in function of more efficient process of learning techniques of relay race running in athletics.

#### Example of relay games:

- Children are positioned in several opposite columns at a distance of 20m. Handoff is done at the pass-off point. The baton is passed from right to left hand. The team which performs the task first is the winner (a trainer defines how many times each competitor should run 20m).

- This relay game is similar to the previous one, the difference is that pass-off is done differently - a competitor who carries a baton first crosses the line at the end of the track, passes by the column and gives the baton to the other competitor, that is, the first in the column and the baton is passed from right to left hand (and later the reverse).

- Relay games in a form of specially arranged sports terrains.

Teaching technique of 4x100m relay race running has the following order of tasks:

The first task: introducing a relay baton (creation of so-called "sense" for a baton through manipulative movements).

#### EXERCISES:

- Throwing a relay baton in the air and catching it with the same hand while walking, slow running and in place.

- Passing a relay baton in different ways and from various distances in a circle, in pairs or with more participants.

The second task: Teaching handoff of a relay baton technique.

#### EXERCISES:

- Handoff of a baton in place. Beginners are positioned in columns of four so that looking from sagittal plane, the right shoulder of the first runner corresponds with the left shoulder of the second participant whose left shoulder corresponds with the right shoulder of the third, and his/her right shoulder with the left shoulder of the last participant. Distance between beginners is 1 – 1.2m which is optional for handoff of a relay baton in place. At the signal "Stick!", a student whose turn it is to receive a relay baton, moves his hand behind his body, receives the baton and passes it in the same way to the next student. A coach should explain that at the beginning, an easier form of passing a baton (from above downward) will be learnt and more difficult one (from below upward) will be learnt later.

- The same exercise as the previous one, only imitative movements of arms and legs while running in place are faster.

- Handoff of a baton, first while walking, then while running slowly. Formation is the same as in the previous exercise. The last student to receive the baton, drops it to the ground when he receives it. The others pass by and when the first member of a relay race team comes to the baton, bends, takes it and does the exercise of a baton handoff again.

- Handoff of a baton, first while walking then while running slowly. Formation is the same as for the previous exercise, only now the last member of a team,

when he/she receives the baton, stops so that others can pass him by, passes the baton from the left into the right hand (now he becomes the first) and gives the baton to the second member of the team, he passes it to the next one, etc.

- Handoff of a baton in pairs with maximum speed of running (first they learn the first exchange, then the second exchange). Run-up zone (5m) and the exchange zone (10m) are shortened. It is necessary to change roles of those who pass and receive a baton, as well as of those who carry it with left and right hand.

- The same exercise as the previous one, only the length of a run-up zone and exchange zone are the same as on competitions.

- Exchange in the first, fourth and eighth lanes.

- Run a 4x400m relay race.

## CONCLUSION

Relay race running is performed on athletic track, although it can be performed in street races and similar events. Relay races performed on a track can be sprint, that is from 100 to 400m or middle-distance races.

Carrying a relay baton from the start to finish in the fastest possible way by four runners through their common effort, demands high speed of running of each of them individually, but also a technique of passing the relay baton.

The best way of passing the baton is the one when the relay baton is carried to the finish with the lowest time consumption. The relay baton should be passed by the hand which a runner receives it with. It means that the first and the third runner carry the baton in their right hands in order to be able to run along the internal edges of their lanes all the time. They pass the baton to the second, that is to the fourth runner who receives it with the left hand and they run along the straight parts of a track and it is not important whether they receive the baton in external or internal part of a track lane. This way of passing the baton enables the shortest travelling of a baton from the start to finish.

The biggest mistakes in relay race running happen exactly at the moment of handoff. False starting leads to disqualification of the whole team. It is especially important to practice the moment of a runner starting without a baton. Actually, he/she starts running at a suitable moment which depends on his/her speed and speed of a runner who passes a baton to him/her. This enables them to come to the distance between the two of them necessary to pass the baton.

Well adopted techniques enable success of the whole team, which creates the feeling of joy, and responsibility for the other members of a team, gives charm to the race and a reason for maximum commitment to the race.

A 4x100m relay race running technique consists of 5 parts:

- Beginning of running (start);
- Starting acceleration;
- Running on a track with maximum speed;
- Exchange and finish.

There are two variants of a baton exchange technique. The first variant is a baton exchange from below upward (underhand) and it is used by most of top competitors. The other variant is a baton exchange from above downward (overhand) and it is mostly used by beginners.

Teaching a technique of relay race running should be started after adoption of a sprint running technique. Basic task of training consists of teaching beginners to handoff a baton at the highest running speed. Order of training is the following:

- Creation of idea of a correct technique of passing a baton, by demonstrations, films, posters, photographs, with necessary explanations.

- Various games with carrying different objects.

- Practicing passing a baton in place, while walking, slow running.

## REFERENCES

- Brown, L., Ferrigno, V., & Santana, C. (2000). *Training for speed, agility and quickness*. Champaign, IL: Human Kinetics.
- Dick, F. (1980). *Trening vrhunskih atletičara* [Top athletes training. In Serbian]. Beograd: NIPU – Partizan.
- Dopsaj, M. (1993). *Metodologija pripreme vrhunskih ekipa u sportskim igrama* [Methodology of top teams preparation in sport games. In Serbian.] Beograd: Naučna knjiga.
- Dragić, B., Herodek, K., Simonović, C., & Cvetković, D. (2013). Characteristics of vertical jump within boys and girls. *Research in Kinesiology*, 41(2), 181 – 184.
- Floria, P., & Harrison, J. A. (2014). The influence of range of motion versus application of force on vertical jump performance in prepubescent girls and adult females. *European Journal of Sport Science*, 14(1), 197 – 204.
- Herodek, K., & Simonović, C. (2013). Strength and development of children and young athletes. *Activities in Physical Education and Sport*, 3(1), 82-88.
- Harre, D. (1973). *Priručnik za trenere*. [Handbook for trainers. In Serbian.] Beograd: Sportska knjiga.
- Homenkov, L. S. (1977). *Atletika*. [Athletics. In Serbian.] Beograd: NIPU – Partizan.
- Karalejić, S., Stojiljković, D., Stojanović, J., Anđelković, I., & Nikolić, D. (2014). Methodics of developing speed in young athletes. *Activities in Physical Education and Sport*, 14(2), 158 - 161.
- Radenković, O., & Stanković, M. (2012). Kinematic parameters differences between the countermovement jump (cmj) and squat jump (sj). *Research in Kinesiology*, 40 (2), 257 – 261.
- Mero, A., Komi, P., & Gregor, R. (1992). Biomechanic of sprint running. *Sport medicine*, 13 (6), 376-392.
- Stefanović, Đ. (1978). Prilog proučavanja postepenog i naglog opterećenja radi poboljšanja maksimalne brzine trčanja kod srednje treniranih sportista. [The study of the gradual and sudden load in order to improve maximal running speed in the middle of trained athletes. In Serbian.] *Fizička kultura*, 2 (3), 192 – 121.
- Stefanović, Đ. (1989). *Atletika* [Athletics. In Serbian.] Priština: Zavod za udžbenike i nastavna sredstva SAP Kosova.
- Stefanović, Đ. (1992). *Atletika 2 - Tehnika* [Athletics 2 - Technique. In Serbian.] Beograd: Samostalno izdanje autora.
- Stefanović, Đ., & Stefanović, R. (2002). *Teorija i metodika atletike* [Theory and methodology of Athletics. In Ser-

- bian. ] Beograd: Samostalno izdanje autora.
- Stefanović, R. (2013). Some funds of development of the motor and functional abilities of young athletes in the preparation period. *Activities in Physical Education and Sport*, 3(2), 244 – 247.
- Stefanović, R. (2012). *Atletika* [Athletics. In Serbian.] Leposavić: Fakultet za sport i fizičko vaspitanje.
- Tomov, D., & Ivanov, S. (2014). Examination to the level of the sport – technical skills of the students from SWU ``Neofilt Rilski``. *Activities in Physical Education and Sport*, 4(2), 184 - 187.
- Tončev, I. (1991). *Atletika, tehnika i oobučavanje*. [Athletics, Technique and Training. In Serbian.] Novi Sad: NISJP ``Dnevnik``.
- Zenon, V. (1988). *Savremeni trening* [Contemporary training. In Serbian.] Beograd: Naučna knjiga.
- Živković, M., & Lazarević, V. (2011). Influence of the flexibility and explosive power on the results in sprint disciplines. *Activites in Physical Education and Sport*, 1(2), 123 – 127.

## Correspondence:

Rade Stefanović  
 University in Priština,  
 Faculty of Sport and Physical Education,  
 Str. Dositej Obradović bb, 38218,  
 Leposavić, Kosovo and Metohija, Serbia  
 E-mail:rade.stefanovic@pr.ac.rs