DEVELOPING SPEED IN YOUNG PLAYERS

by Vladimir Koprivica

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Speed is ability to perform movements and motions in the shortest time possible. Think of it as maximum movement. Speed is an elusive creature, a complex mobile human ability consisting of various elements. By enhancing these abilities with special games and drills, a smart coach will help develop and increase a child's overall speed.

It's perhaps more appropriate to talk about speed abilities than about speed as a unique ability. Speed has various elementary components: speed of reaction, frequency of movement, speed of each single movement, acceleration ability, and maximum speed. It is very interesting that there is no significant connection between these forms of speed. In other words, a player can react quickly, but demonstrate poor acceleration ability at the same time. Therefore, to increase speed in a young athlete, it is best to work separately on the development of each speed element.

Natural development of these elements is not simultaneous-some are developed earlier, others later. Coaches must be aware of this in order to fully develop a young player's speed abilities.

SPEED OF REACTION AND FREQUENCY OF MOVEMENTS

Speed of reaction and frequency of movements are abilities that are initially developed very early on, generally at the preschool age, and very dynamicly between 7 to 11 or 12 years of age. The basic reason for this is the fact that parts of the nervous system concerned with speed and reactions are mostly formed during puberty.

After this optimal growth period, the central nervous system is changed very little, and so the possibilities to influence speed of reaction and frequency of movement are very small.

SPEED OF EACH SINGLE MOVEMENT, ACCELERATION ABILITY, AND MAXIMUM SPEED

Speed of each single movement, acceleration ability, and maximum speed should be developed early, since the conditions for that are mutual and the same.

Maximum movement speed is mostly an hereditary ability that depends on the number and percentage of "fast-twitch muscle fibers" an athlete has. Each muscle is a distinct genetically-determined blend of what's called slow twitch, or Type I fibers, and fast twitch, or Type II fibers. It's the slow-twitch fibers that are called upon during low-intensity exercise, such as bicycling and walking. However, for explosive actions, such as sprinting down a basketball court or jumping for a rebound, it's the powerful fast-twitch fibers that spring into action.

Young athletes may have a ratio of these fibers in the range of 60:40 or 40:60, while a select few may have as much as 90 percent of one type of fiber. The problem with fast-twitch fibers is that they decline with age. If you don't use them, then you lose them.

Progressive weight-training exercises can strengthen fast-twitch fibers. These fibers will be mobilized to perform the high-intensity exercises, while the slow-twitch provide the endurance to perform each exercise over an extended period of time.

Having fast twitch fibers does not impart speed. This potential for fast movement will remain unrealized unless it is stimulated and helped through specialized training. We will never make a fast basketball player out of a naturally slow boy, but on the other hand, we have to train a naturally quick boy properly in order to make him really fast.

Many aspects of speed are related to speed of thought and decision making. Therefore, the coach mustn't be deceived

during the selection process by estimates of elementary speed levels because the basketball player is naturally not a sprinter! It is much more important to observe the children at play, judging them according to how fast they switch from one movement to another. Search for children who are fast in play and train them to become like that when they play basketball! Many naturally fast players are not able, for various reasons, to use their maximum straight-ahead speed when they play basketball. They may be slow with the ball or they may move too fast and are not able to coordinate their speed with the pace of the game. The cause of this can be poor training, but it is more often due to poor coordination. On the other hand, a slower child (who is still fast!) can have the ability to use his maximum speed playing the game.

As we can see already in this quickly evolving game of basketball that is played today, extremely fast players who are skillful in moving with and without the ball completely dominate the game. Coaches should be looking for that type of young athlete to work with.

Basketball demands speed in various movements. Elementary speed (simple movements) is directed by a pyramidal motor path. But, an extrapyramidal path is more important for basketball because it is responsible for the delicate movements that are necessary for successful technique performance. Thus, when working with young players, special attention should be paid to developing complex speed forms.

1. SPEED OF CHANGING MOVEMENTS

The examples of this speed form include running 10 x 5 meters and then moving in a basketball stance for 6 x 4 meters. Both are true tests of speed. To do well in this stop-and-go drill, the young player needs a certain level of muscle power. It is very important to prepare the muscles for speed games. Great care must be taken by coaches when having children perform these sprints because all the stopping and starting places great stress on the still-developing knee joints of the young athletes. Be sure to have a good warm-up period before beginning these high-intensity drills.

2. SPEED OF CHANGING THE DIRECTION OF MOVEMENTS ("ZIGZAG" MOVEMENT)

A player runs as fast as he can with the ball and then without it, covering the distance as fast as he can between certain points on the court, which are pre-arranged to make him constantly change direction. These points can be at the same distance from each other, or even better, at different distances. These "zigzag" movements, performed with the ball in the beginning and then without the ball, can be used as a speed test. Using a stopwatch, you can easily determine the rate of specific basketball speed on the basis of time differences.

3. SPEED OF TECHNIQUE PERFORMANCE

Generally speaking, basketball techniques should be performed as fast as possible. However, this speed often must be tempered in order to react to what the opponent is trying to do. As soon as the basic basketball skills are developed, it's time to begin a variety of drills using an opponent. The coach should always insist on good timing for starting fast movements (for example, penetration) as well as a constant change of rhythm, which forms the basis for efficient technique.

4. SPEED OF SWITCHING FROM ONE MOVEMENT TO ANOTHER

In the training process of young players, we should always use drills with different movements with and without the ball, along with changes of pace and movement rhythm. Rectilinear, curved, and "zigzag" running should be used, along with sudden stops, starts, and a variety of jumps. What these drills do is help increase a child's agility.

Special attention should be paid to fast switching, going from one movement to another. You will find that a child can be fast in separate movements (running straight ahead, for example) but slow when combining a variety of movements.

If a child doesn't show any improvement after practicing these agility drills for some time, we can say, with a high percentage of probability, that that child is not the ideal candidate for basketball.

5. SPEED OF IMPROVISING AND COMBINING DIFFERENT MOVEMENTS

This is the most complex speed form, since it consists of all the other forms. This type of speed is usually developed:

a. In basketball play (more often with developed players) and
b. In various elementary games (more often with children).

When working with young players, the Yugoslav basketball school values various types of games. These games demand very quick improvisation, adjusting the movements to a sudden change of situation, and then combining different types of them.

I would like to focus on two games played without the ball. I have found that children, who do not do well in these games, even after playing them for some time, don't do well in basketball, either. They also typically have great difficulty in learning new movement skills.

TAG GAME WITH "HIDEOUT"

One child chases after the other children. They can find a "hideout" by creating groups of three children in a line, where children at the ends of these triplets have one hand free. When a child who is being chased touches the hand of a child in a triplet, the child at the opposite end is freed and can run away. For example, the child in the middle should stand faced in the opposite direction from the other two. That way, the child who is searching for "hideout" must take care of placing himself in the right direction while continuing or creating a triplet.

TAG GAME WITH "CUTTING"

Players are spread on the half-court without any order. One child chases after one selected by the coach and can catch only him only when some other child crosses ("cuts") the imagined line between the chaser and the fugitive. From that point, the chaser must run after the one who "cut" the line. Under "cutting" is considered only the movement where the line is crossed with both legs, which means that it is allowed (and preferable) "cut" faking.

When preparing for these games, the coach must clearly define for himself the goals he wants to achieve. If the goal is the development of some segment of speed, and if the coach knows the basic methodology, it is easy to choose some of the familiar drills, or else he can combine them and create new ones.

When working with children, a variety of competitive speed drills is preferable, with adequate time given for rest. In this way, the practices will be interesting for the children as well as great ways for enhancing speed in children.