



# Coaching developing players, “a view from the ecological approach”

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ITF Coaching and Sport Science Review 2015; 65 (23): 21-24

## ABSTRACT

*This article discusses a working methodology for tennis players and explains the purpose of this strategy. Starting from the principles of ecology and holism, it is described in a manner that relates to tennis. It also elaborates on those aspects we consider to be significant in enabling a junior tennis player to prosper and develop into to his/her full potential.*

**Key words:** environment, players, integrated coaching  
**Received:** 21 December 2014  
**Accepted:** 3 February 2015  
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## INTRODUCTION AND METHODOLOGY

Ecology is the science that studies living beings, their environment, distribution and how they are affected by the interaction between organisms and their environment.

The word “holism” comes from the Greek language (all, whole, total) and it is a methodological or epistemological position that states that the systems (either physical, biological, social, economic, etc.) and their properties must be analysed as a whole rather than on an individual basis.

The basic ideas of this approach are:

- Development implies continuous adjustments between the person and the environment: a process lasting a life-time.
- Knowing the environment means knowing how things work... how to better adapt...
- Human development is the progressive adaptation and adjustment between an active being and the setting where he/she works that also considers the relationship between those settings.

If we apply this approach to tennis, the ideas are the following:

- The players must be shaped by the environment, and they must shape their own environment too.
- Learning is supposed to be a reciprocal relationship between the players and the environment.
- The environment provides resources and opportunities for players who get the required information and act in the environment.
- The emphasis is laid on teaching the players as a whole.
- Coaches must be the performance facilitator for players.

The integrated or total approach involves a complete vision of the tennis player. When working one aspect, the others develop simultaneously. For example, when hitting a forehand we work on technique (preparation, taking the racket to the ball, follow through, etc.), there is a tactical component involved as well (cross-court, down-the-line, high, low, hard, slow, etc.), a physical component, since it implies moving the muscles of the body to play the forehand, so coordination is a vital cog of the kinetic chain. There is also a psychological component, since the player must keep his/ her attention on the ball, the racket arm while also deciding how to execute the shot (down the line,

cross court, etc.) as all these things cannot be isolated. This interrelation is valid both for general and specific work.

The figure of the players and his/her intrinsic motivation are key. It helps to maintain self-confidence, it enhances performance and reduces behaviour problems while challenging decision making.

Considering this new concept in tennis teaching, we must remember that coaches must resort to more open teaching methodologies, with all the changes they entail, partly created by the coaches, the students, the materials, etc...

## What do we know about these models?

We know that there isn't just one particular way of performing a motor skill, the forms of movement and the results are determined by the targets, the context and the individual constraints that are constantly changing.



Figure 1. Aspects of integrated or whole coaching.

We base our research on the theory of Martins' Neuro physiological model that states that a child is born with a lot of undeveloped potential (aptitude, capabilities, qualities, etc.). This will depend on genetic factors and on the life experiences during childhood, so the idea is to boost those aspects that are necessary for peak performance once a player is at the

developmental stage that will require more specific and detailed coaching.

**How do we work in ITae?**

Knowing that performance coaching involves an interrelationship between the technical, tactical, physical and psychological aspects, a coach needs to prioritise and focus on these aspects. Since the same exercise can meet different objectives simultaneously, coaches must highlight the aspect that is more relevant to the player. It is important that when giving direction to a player it is well structured and focused on relevant corrections for the objective to ensure that the player is not over loaded with too much instruction.

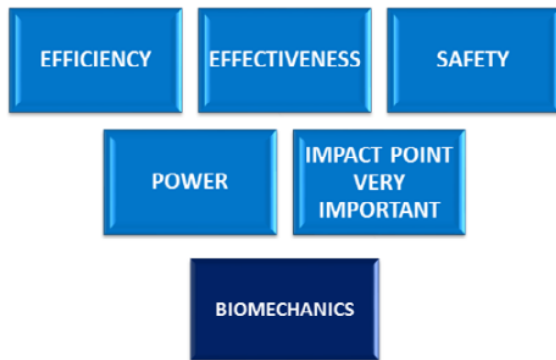


Figure 2. Technical work related aspects.

A vital technical aspect of the stroke is the contact point, therefore coaches spend a significant amount of time on developing a player’s optimal contact point. An optimal contact point is one that is efficient, effective, consist and enables a player to produce power. In order to create this we rely on biomechanics. By using modern teaching methodologies, open and based on the biomechanical principle it will enable players in the long run to generate a strong hitting technique.

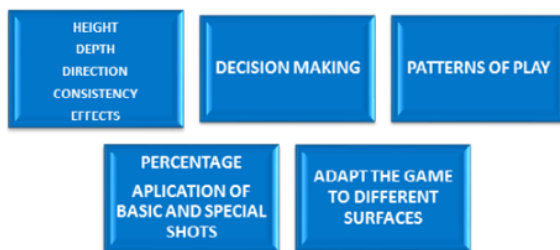


Figure 3. Tactical work related aspects.

The basic items a coach should look to work on daily include: height, depth, consistency, direction and accuracy. An emphasis should also be placed on decision making, a very important aspect which is present in each stroke. This can be developed by combining and working on different playing patterns, the tactical application of the special strokes, the adaptation of the game to the different surfaces and on percentage tennis. All this can be achieved by means of games, exercises with open teaching, and ensuring players are aware of all these aspects and of the importance of entering competition in optimal condition.

**PHYSICAL**



Figure 4. Physical work related aspects before the growth peak.



Figure 5. Physical work related aspects after the growth peak.

For physical training coaches have to take into account the maturity level of the player, that is, the chronological and biological age, for which it is important to consider the speed of the peak of growth, a formula that tells us where players stand from the biological point of view.

Before the players reach the growth speed peak, a coach should ideally work on the coordination capabilities with coaches taking responsibility for each player’s physical progress and growth. Thus, insisting players form positive habits (warm-up, recovery after competition, nutrition related aspects, having a shower and doing stretching exercises, etc.) at an early age. It is at these early ages that the neuro-motor methods can be introduced and incorporated into training sessions since the nervous system is more adept to creating new interactions between its structures.

**Once a player has finished growing, training should focus on:**

- Strength, introducing explosive strength
- Endurance (interval work or oxygen maximum consumption level).
- Speed (RSA, capacity to repeat sprints).
- Compensation work (Core Training for gluteus, hip and back, shoulder rotator cuffs, stabilizing muscles of the scapula). Why should coaches work this way? Because it is key to having a good neuromuscular base which doesn’t restrict the development of tissue. It is not until the players have surpassed their Peak Growth Velocity that they will have the necessary enzymes to be able to adapt significantly in aerobic components.

## PSYCHOLOGICAL OR BEHAVIOURAL

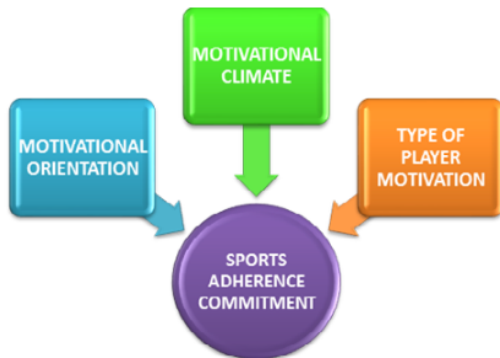


Figure 6. Targets and content of psychological work.

Two of the main objectives installed between coach and player should be: staying in the sport and being committed. We know that staying in the sport and being committed is the direct result of an appropriate motivation, a good motivational direction, a strong motivational climate and the students themselves being motivated to learn and improve daily. A key reference for including motivational aspects into coaching methods is Deci & Ryan's Self-determination theory. Knowing that the motivational climate is created by coaches, players and parents, all must push in the same direction. Training programs that include a school for parents, can slowly enable all parties to buy into the working philosophy of the program. Additional practices that facilitate peak performance include working on emotional control, visualisation and breathing techniques, routines and rituals during matches, attention, concentration and anxiety control. Coaches can also use pedagogical principles that are used in teaching and in education psychology when preparing their programmes and carrying out training sessions. In order to involve students, coaches should look to work with six dimensions mainly:

- 1- Tasks
- 2- Authority
- 3- Recognition
- 4- Groups
- 5- Evaluation
- 6- Time

These dimensions can be summarized as TARGET.

### SAMPLE EXERCISES

1. This drill's objective is to improve first serve percentage while providing the opportunity to practise returning serve also: The players serve 10 times each. If the server wins the point with the first service, he wins 2 points. If the server wins the point with the second service, he wins 1 point. The receiver will accumulate points by gaining 1 point if he/she wins with the first service, if he/she wins with the second serve, he/she wins 2 points. The winner is the player who wins more points after having served and received. This way, players must be very alert when playing all points.

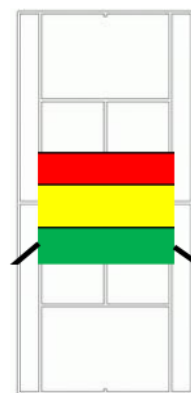


Figure 7. Application of the traffic light theory in exercise 2.

2. To teach the traffic light theory with developing kids, the coach throws the balls to coloured zones. If the ball bounces on the red zone, they must play over the double net. If the ball bounces on the yellow zone, they must play to the rope. If the ball bounces on the green zone, they must play under the double net. The drill progresses until the players can use this theory automatically and almost without thinking.

### CONCLUSION

If we, as coaches, want our players to reach their maximum potential, we must use varied coaching systems that enable them to explore different solutions and we the coaches must help our players when they are unable to find their own solutions or when they make mistakes. This way, our role as a coach changes a bit as regards to more traditional teaching, in which the coach tries to control everything. This way of working implies team work, since each area needs specialised and qualified experts. On the other hand, we must consult scientific research to develop those aspects that can be improved in our players, ourselves as coaches or in the environment. Therefore we are required to be mentally open to new trends and different methods etc.

A vital aspect that must not be overlooked is continued education and training for coaches of all abilities. This must be a continuous and periodical process, in all areas but in particular pedagogy, psychology, communication processes, etc.

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