

LEARNING TENNIS AS AN OPEN SKILL - PERCEPTION

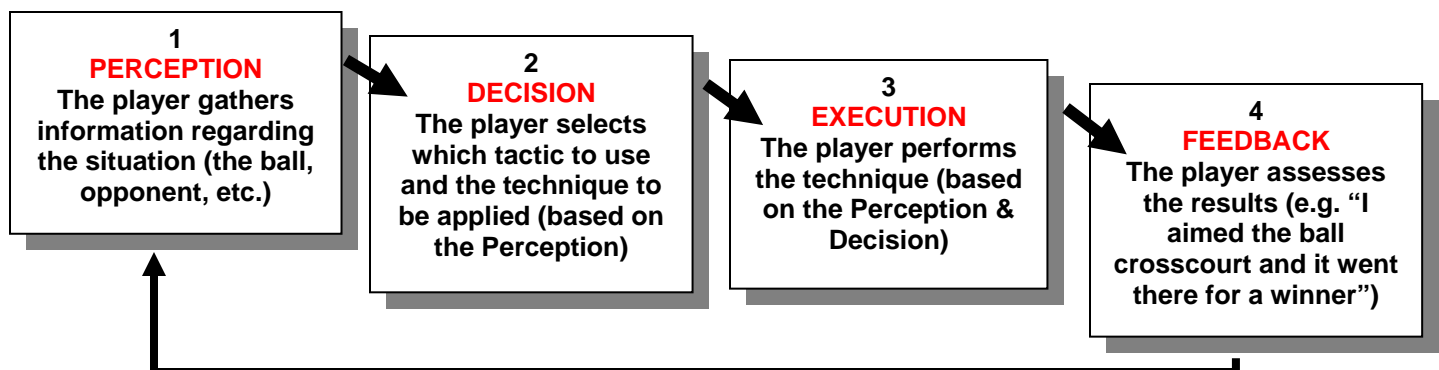
In motor learning, tennis is classified as a, “Perceptual motor skill”. In other words, successfully applying technique is based on seeing what is going on (with the ball and opponent) and making a decision to adjust accordingly. This is in contrast to sports that used ‘closed skills’ (e.g. gymnastics or diving) that don’t require skills to be adapted to the situation. In Closed skill sports, moving correctly is the only priority.

However, in tennis movement isn’t ‘correct’ unless it is adapted. For example, a player must adjust their forehand technique if the ball received is higher, wider, faster, has spin, etc. It must also be adjusted for the location on the court (a $\frac{3}{4}$ court FH shot from the side of the court uses different technique than a FH shot hit deep from the centre). Skills that must be adapted are called ‘Open skills’.

Even though this critical adaptation process is required on every shot in tennis (except the serve), the skills necessary are typically woefully ignored or under-taught. Not identifying the characteristics of the ball received means the shot will not be adapted correctly to gain the desired result.

The Open Skill Process

In the 1980’s, then Canadian Head National Coach Louis Cayer systemized a method of instruction based on the principles of open skill development. Cayer applied the research that revealed that, on **every** shot, a player goes through 4 steps of an information processing process.



The implication of this revelation is that tennis needs to include perception training (seeing and ‘reading’ the characteristics of the ball, the opponent, the court, etc.). This type of training is required at all levels since it is the critical first step of the process.

How far is your F.A.R?

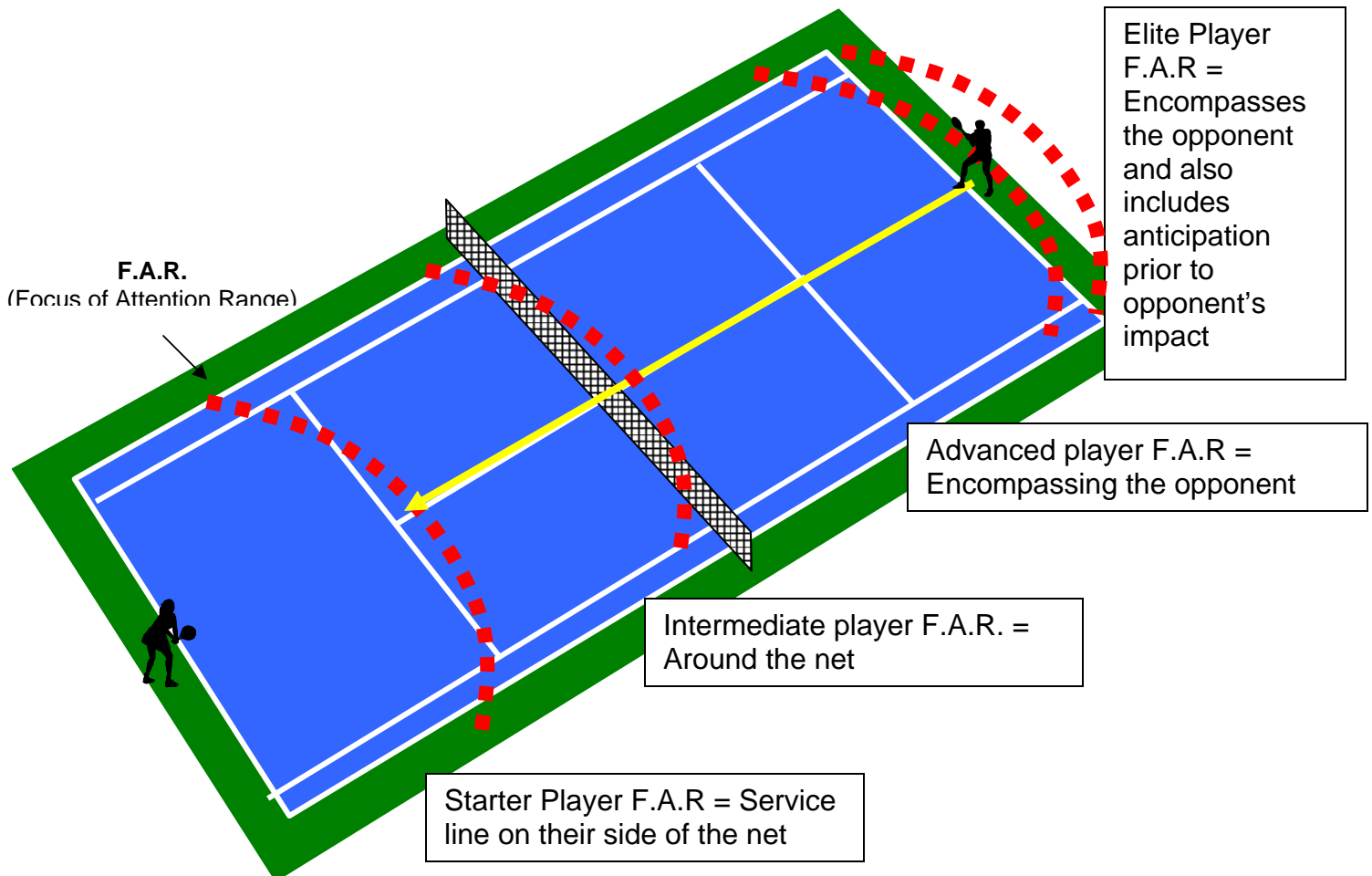
The first tool for training perception is what I call your, Focus of Attention Range (F.A.R). The concept is simple. Your F.A.R is where the information you see registers in your brain enough to cause you to move.

Starter players have F.A.R that starts about the service line on their side of the court. They see the approaching ball right from where the opponent hits it however, nothing registers until the ball is about to bounce and then they react. Of course, this is a generalization and players who are good athletes and have successfully played other sports can have a F.A.R that is more developed.

Intermediate players have a F.A.R that starts around the net. It is like the ball they see is in a fog. When the ball comes out of the fog, it registers with them to react.

An **advanced player** has a F.A.R that includes the opponent on the far end of the court. They pick up relevant clues right from the opponent's impact of the ball.

An **elite player** has a F.A.R that encompasses the opponent but also includes gathering clues to anticipate the characteristics of the opponent's shot.



The way to determine a player's F.A.R is to observe from behind the court. When the opponent hits the shot, take note of when you see the player start to move. When they move, take a mental 'snapshot' of where the ball is. This is their F.A.R.

To improve their F.A.R, the goal is to help them to quickly shift their attention to the other end of the court after they hit a ball to their opponent. With a little bit of training, even a starter player can have an advanced F.A.R.

For performance players, physical trainers spend hours just for minimal gains in speed. Helping players react earlier can lead to big improvements in play.

2 Types of Perception

When training perception, we can separate it into two types:

- **Ball-Based Perception:** Reading the characteristics of the ball (e.g. It's direction, height, distance, speed & spin)
- **Opponent-Based Perception:** Reading the actions and characteristics of the opponent

All of winning tennis rests on interacting with these critical variables effectively. The first listed variable of Ball-based Perception is the one to master first. Any clues we can get about what the ball is going to do pays big dividends on getting into position early.

I am not talking about anticipation but simply 'reading' the ball characteristics. Having said that, reading the ball and focusing attention onto the opponent's side of the court when they are hitting is the important first step to open the door to anticipation training.

Here are some basic drills that can train perception skills.

Ball-Based Training Drill:

"Where"

Players rally from baseline to baseline. When the opponent impacts the ball, say the cue word "**Where**". This represents the question, "*Where do I think the ball is going*". At the same time as saying "*Where*", perform a split step to prime the reaction to explosively take off to retrieve the ball. This helps the player keep their 'radar' on 'high alert'.

This drill also works for volleys and returning serve.

Opponent-Based Training Drill:

The Finger

Players rally baseline to baseline. One player is designated the 'hitter'. They either hit the ball with their regular grip or, fully extend their index finger while stroking. The other player (designated the 'observer') must call out loud if the opponent's finger is **"out"** (extended) or **"in"** (not extended). For a more advanced version, both players can observe and expose the finger to each other.

Done correctly, this drill will encourage the player to pay close attention to the impact area of the opponent's racquet which can lead into gathering relevant clues about racquet angle, grip, etc.



"Out"



"In"

Shifting Attention

Sometimes, it is the shifting of attention that causes a challenge. It is fine to see the opponent's impact however, the ball must be tracked back to their impact as well. Players must shift their focus from their impact to the opponent and back again repeatedly. If the shift doesn't happen or, happens too late, perception (and the quality of the stroke) suffers.

Look out for a players doing these drills and not shifting attention back to their impact area. One solution is to modify the "Where" drill.

“Here & Where”

This is a variation of the classic Timothy Gallwey “*Bounce, Hit*” drill. It is performed the same as the “Where” drill but the player must also say the cue word “*Here*” when *they* impact the ball. It is important to synchronize the saying the cue word at the exact moment the ball impacts the strings. This is only possible if the player truly has their full attention on the ball at impact. This synchronization is improved if the player exhales at the moment of impact. Have them exaggerate saying the word “**HHHeere**” to emphasize the exhale.

If a player can say both “*Where*” and “*Here*” cues at the appropriate time, they are fully engaged in focusing their attention.

It is important to note that often at first, the player uses so many resources to say the cues that they feel they can’t even hit the ball. Assure them that the attention is critical to perform and it will become automatic soon enough.

Get Ahead

One of the elements that prevents players from tracking the ball is inappropriate head movement. Tracking a ball well, requires a player’s head to be still and looking forward. When the ball bounces, the head can drop to focus on the impact. Coaches should look for the appropriate movement of the head when doing these drills. This is especially important when players are running laterally. If their head turns to the side, they will tend to impact on the side rather than in front.



Federer’s head is, “still & looking forward”

Head Drills

To help a player keep their head pointing forward, put on a baseball cap. When moving to the side, ensure the cap is pointing to the net.

To help the head be balanced and still and avoid bouncing up and down while moving, try to balance a folded towel on the head while rallying.

Eyes & Ears

Visual stimuli are not the only thing that provides pertinent information. The sound the ball makes can also give clues as to the speed and spin of the ball. Auditory stimulus tends to be more relevant for players at the advanced and above levels.

To practice hearing the ball, have the player say “*Spin*” or “*Flat*” as soon as the opponent hits the ball. A player can also say “*Fast*” or “*Slow*” when they hear if the opponent’s impact is powerful and solid, or weaker.

Conclusion

Technical stroke training is not complete unless it includes perception. Unless a player can gather relevant clues about the situation and ball, and act on them, they cannot play tennis very successfully. Coaches need to include this kind of training to empower players.

If you would like to ask a question, give feedback, or want more information, contact us at:
www.acecoach.com