FULFILLING POTENTIAL

by Lee Friend

"Anything worth doing, is worth doing right"

is a well known saying by American author Hunter S Thompson, I googled it, so it must be right! The quotation in the correct context makes absolute sense, but what if it's something that needs doing and you don't know how to do it, can you get it right then....?

Doing something right first time, before being taught and acquiring skill is a million to one chance, a total fluke. Cultivating a high level of skill is dependant on a number of things, some of which I have chosen to write about to help educate, assist and further your child's development, not just in their tennis endeavours but I hope in other walks of life too.

Accept the time it takes to learn....

The margin of error that is hinged on executing a rhythmical, accurate tennis stroke is immense. Half a step to close and the racket pathway gets obstructed. One degree out on the rackets angle results in missing the desired target by metres. A movement performed a hundredth of a second too late makes or breaks a shot. This accuracy, delicacy and understating is developed over a period of time. Real physical changes in the body and nervous system must occur to acquire skill. Proteins must be deposited in a way to insulate the neural pathway (myelin) that support carbon copies of the same movements to be performed accurately time and time again. These perfectly formed spirals of insulation give guidance to the electrical impulses that are about to inform which working muscles are required. This insulation is the foundation that skill is built upon. Positive and negative reinforcement is necessary to encourage the correct behaviours. Practicing the desired performance repetitively and accurately enough will create the opportunity for the correct neural pathways to be insulated.

Timescale

The time allowed for a process or sequence of events to take place

Process

A series of actions or step applied in a particular order to achieve a specific end

Myelin

Proteins forming an insulating sheath around many nerve fibres., increasing speed of which impulses are conducted

Our bodies are not biased for or against good or bad habits, they form in exactly the same way. The body knows no difference between the two without the reinforcement of positive or negative feedback.

The actions we perform simply engrain and get written into our muscle memory, if the performance is within the desired measures it becomes a skill, if not it manifests as a bad habit.

Insulating the wrong pathway can be as easy as insulating the right one. Trying to insulate the right pathway can be very misleading for the participant as its often a new movement with little pre-existing insulation making the movement feel wrong or unknown. This is an aspect of learning which must be recognised and accepted to forge correct pathways. Often, working through the correct movements gives an undesired result, the ball doesn't behave the way you expected or wanted. Most accept a bad shot can go in, not many accept a good shot can go out. This divergence in bad result but good process isn't easy especially for young participants to understand due to the feedback related to the outcome of the ball. Being result orientated prevents further progression, the key is to be process orientated.

Add the variation of environmental changes to our sport and a whole new level of complexity is added. It takes time and time spent under the correct conditions to build skill. 5 years to become a doctor, 10,000 hours to become a professional tennis player, time is an unquestionable factor in development and a necessary ingredient to create a skilled performer, time not just to gather knowledge but to allow the physical changes to occur.

Associative

The association of things: making associative links. Putting things together to compile knowledge.

Cognitive

Cognitive processes use existing knowledge and generate new knowledge.

Autonomous

Having the freedom to govern itself or control its own behaviour.

Muscle memory

A procedural memory when activities can be performed without conscious thought

Nerve Impulse

An electrical signal transmitted along a nerve

How do we learn?

Much research has been carried out to determine the ways in which we learn. It is agreed by many that there are three phases of learning, a theory to which I subscribe to.

1. The first phase is the Associative Phase of learning. This phase is giving the participant the knowledge and understanding of the process., a depth of knowledge that gives the purpose to train a certain way. I often use this stage as the "buy in phase". If a participant can see the benefits of the teaching point, they are more likely to apply effort and feel a need to achieve because they understand the purpose of what they are doing.

2. Once the depth of knowledge is great enough you enter the Cognitive Phase. This is the repetitive part of the learning process. Do something long enough, with accuracy, and layers of myelin will form on the working neurones ingraining a map for impulses to travel through. The map guides and strengthens the signals sent from the brain to request an output from the desired muscle groups. After

prolonged practice the signals can travel along one of the most direct, disruption free highways that takes a thought and connects it to its appropriate action.

This phase can last a varying amount of time. It's dependant on an uncountable number of factors. However, a large portion is dependant on the depth of skill already acquired by the participant and how athletic the participant is prior to engaging on a new process. The more athletic the subject is, the easier it is for the neural pathway to develop.

3. Finally, we enter the Autonomous Phase. Often only the dedicated amongst us have the ability to function in a way where a small segment of conscious thought is necessary to execute motor skills with absolute accuracy. This is the state athletes strive for: To execute a movement with accuracy time and time again despite fluctuations in environmental factors. We all have motor skills where we have achieved an autonomous level, the more simplistic the movement the easier it is to achieve. Yet some autonomous actions we take for granted are far from simple. For example, the act of walking, for my son at 10months old was far from simplistic, but it is one of the first physical movements where we can see the learning process play out. The internal drive to learn this independently at such a young age is inspiring in itself. As we age the graft, effort, trips and falls of failure (the critical feedback required) fed back the relevant negative reinforcement is all forgotten. The neural pathways are now so prolific the movements are performed by autopilot.

Attitude is everything.....

Everything

all things of importance

Anything

used to refer to a thing, no matter what it is

Right

correct, accurate, without error, unerring, exact, precise

Attitude

A settled way of thinking towards someone or something

Attitude towards any endeavour, for me, is the most influential factor in determining success or failure, which brings me back to our original statement "Anything worth doing, is worth doing right". The difference between a beginner and an expert is that the expert has failed more times than the beginner has even tried. Getting something wrong is an integral part to getting something right. Only the right attitude can accept the short falls and use them as a stepping stone success.

We must embrace a timescale for the player/coach to apply the learning process with positive attitude and discipline within the appropriate volume of cognitive training and allow some failure to forge a pathway to success.

Our own attitude towards getting something wrong must change in order to get it right. So if I may, I will make a change to the old adage of "doing something right....." that takes into account the value of learning and acquiring skill....

"Everything worth doing starts with imperfections. **You'll realise its worth through the effort of getting it right".**