

## INTRODUCTION

There is scientific evidence about the existence of activation in neuromuscular connections just by using the imagination or by mentally planning action.

It is described as a "top-down" process, that is, from top to bottom, through the creation or regeneration of thoughts that in turn activate other neural parts and muscular network connections.

### What you believe, you create

What you believe, you create. Yes, we attract what we think, but not in a superstitious or magical way. This has a rational explanation. When we think about something, we keep our mind focused on that aspect, so it is more likely to be fulfilled because all the energy and concentration that is set there to achieve it.

We use vision continuously to create emotions, motivation, evoke memories or experiences in our day to day. When we walk past the bakery, and it smells like freshly baked bread, we can practically taste it, and when we want to buy a house and go to visit it, we can imagine living in it before it happens.

The same thing happens in sports. In fact, most athletes have been able to use these techniques in a casual or intuitive way. Many athletes are capable of seeing themselves at the finish line, raising the cup or celebrating victory, and that brings them closer to achieving it, to be champions.

If we find ourselves unable to play a world championship, it is very likely that we will never make it because we will not even try. But if we see ourselves with abilities, and we dedicate time to learn, practice and train hard, the chances of getting to play in the World Cup increase. *"If my mind can imagine it and my heart can believe it, then I can achieve it,"* said Muhammed Ali.

## WHAT IS Visualisation?

Visualisation is a psychological skill that consists of reproducing in our head an experience, either in the past or future. In sports, it is mentally seeing yourself in a competition, training, or in any other situation.

Through visualisation, you can recreate previous positive experiences or project new events to mentally prepare for the performance. We can use it to strategise, learn new techniques, improve concentration and confidence, and compete with less stress.

It can also help us to correct mistakes made in the past, when analyzing previous competitions, as well as to prepare for future events.

## WHAT ARE THE GOALS OF VISUALISATION?

Visualisation helps us feel safe and prevents possible mistakes or situations that generate nervousness and insecurity. It creates or increases confidence and therefore lowers anxiety; mentally representing a good performance helps us feel capable of performing well. It helps to develop strategy, sports skills, as well as any other activity, behaviour or performance that we can visualize.

Another important fact is that it improves concentration, by this we (i) mean that we can visualize ourselves in situations in which, in general, we lose concentration and then imagine ourselves calmed and focused on the next step to take.

Also, through visualisation, emotional responses are channelled (what do you mean by challenged? Maybe you could say "*processed*"?). We can imagine situations that have elicited inappropriate emotional responses in the past and visualize ourselves responding much more appropriately in a future situation. Visualisation strengthens patience, anchors positivity, and builds effectiveness

The practice and learning of visualisation work is not only useful to improve specific techniques, but it is of great help in dealing with fear, anxiety and excess of nervousness in relation to our sports performance goals. An athlete who has lost confidence after troublesome injuries or accidents in their training can use visualisation work to motivate themselves towards recovery and to try rehabilitation exercises. Many studies show that the use of visualisation, or proper motivation, during injury recovery has great benefits, and leads to even faster healing.

## BENEFITS

Visualisation has been proven to aid in increasing wellbeing and overall functioning, but it may also be used in non-health situations. It simply allows athletes and coaches to visualize themselves achieving any difficult activity that may appear insurmountable or life-threatening. It has been shown, for example, to be particularly beneficial in enhancing athletic abilities. Visualisation techniques are vital for all athletes and their coaches because they can help enhance motor abilities, muscle strength, self-confidence, attention span, anxiety, and stress. Athletes can improve their pain management, endurance, performance motivation, and physical performance by using imagery.

Some benefits of using visualisation are:

- \*It increases the focus of attention, when athletes are being required to reach their full potential.
- \* Athletes learn to be more positive
- \*Athletes understand the importance of goal setting.
- \*Self-control is improved, tension and fear are reduced, while self-confidence grows.
- \*It helps athletes prepares the optimal programme of technical and tactical execution; {mental practice helps to improve temporal and spatial organization} and motor action characteristics.

\*The athlete's thinking becomes more disciplined, organized, and planned, raising awareness of motor skills performance.

\*The time needed to acquire different technical and tactical elements is reduced, and the level of preparedness for stressful situations, characteristic of competitive activity, is increased.

## Olympians and Visualisation in Sports

As Olympic athletes gear up for the 2016 Rio Olympic Games, many athletes are following the successful blueprints laid out by their 2014 winter Olympic counterparts, who competed successfully in Sochi.

Canadian bobsledder Lyndon Rush credited imagery with helping him keep his head in the game throughout the long, arduous four years of training between the 2010 and 2014 Olympic Games. He said, *"I've tried to keep the track in my mind throughout the year. I'll be in the shower or brushing my teeth. It just takes a minute, so I do the whole thing or sometimes just the corners that are more technical. You try to keep it fresh in your head, so when you do get there, you are not just starting at square one. It's amazing how much you can do in your mind."*

Emily Cook, veteran American freestyle skier and three-time Olympian, described how her specific imagery scripts and mental rehearsal involving all the senses have helped her maintain longevity in her sport. She said *"Visualisation, for me, does take in all the senses. You have to smell it. You have to hear it. You have to feel it, everything."* *"I would say into a [tape] recorder: 'I'm standing on the top of the hill. I can feel the wind on the back of my neck. I can hear the crowd, kind of going through all those different senses and then actually going through what I wanted to do for the perfect jump. I turn down the in-run. I stand up. I engage my core. I look at the top of the jump. I was going through every little step of how I wanted that jump to turn out."*

Nicole Detling, a sports psychologist with the United States Olympic team, explains the importance of having a multisensory approach when visualizing. *"The more an athlete can imagine the entire package, the better it's going to be."*

## Michael Phelps

Whilst Phelps' life hasn't been perfect, and his struggles post retirement have been well documented, it is fascinating to see that the race day of this sports outlier is punctuated by deliberate rituals.

In interviews conducted with Phelps' coach, Bob Bowman, and contained in Charles Duhrigg's book *"The Power of Habit"*, we gain some insight into what has made him a swimming legend. When Bowman first met Phelps' as a 7-year-old, he observed the perfect swimmer's body, but also saw a child who was prone to stress and emotion. At the time, his parents were divorcing, and he was having difficulty coping. He struggled to calm down before a race.

Bowman bought a relaxation book and encouraged his mother to read it to him each night. The book contained a script – “*Tighten your right hand into a fist and release it. Imagine the tension melting away*” – that tensed and released each part of his body before he fell asleep.

Bowman believed that for any elite athlete, the key to victory was creating the right routines. He helped Phelps create rituals that would help him become the mentally strongest swimmer in the world. When Phelps was a teenager, Bowman would tell him to go and watch the “videotape” before going to sleep and when you woke up. The “videotape” wasn’t real, but a mental visualisation of the perfect race. Phelps would imagine diving off the blocks and, in slow motion, swimming flawlessly. He would visualize the strokes, the pool, and the finish. He would lie in bed with his eyes shut and watch the entire completion down to the smallest details. During practice, when Bowman would want Phelps to swim at race speed, he would shout “*Put in the videotape!*” He didn’t need to control all aspects of Phelps' life. All he had to do was focus on a few specific habits that had everything to do with creating the right mindset.

## HOW TO TRAIN VISUALISATION

There are several methods to train and begin to get closer to visualisation, for the purpose of this essay, two sources/methods will be mentioned and elaborated on

There are different methods of visualisations used by athletes, who have employed a variety of strategies to picture their games and prepare their brains for impending competitions. To achieve the best results, visualisation approaches should encompass the five major senses (touch, hearing, sight, smell, and taste) as well as critical features such as viewpoint, mood, surroundings, task, and timing. Mental rehearsal (or visualisation) is effective because the subconscious processes are experienced as if they were real, by firing the neurons responsible for skill acquisition, making the person calmer and more adaptable to stressful situations. This can speed up the learning process in athletes and others; one hour of mental training per day in 6–10 sequences provides a distinct advantage that cannot be obtained by any other way.

Athletes employ guided imagery techniques and practice to create mental maps that help them perform effectively. Visualisation techniques that work can benefit all athletes, regardless of

their goals or performance level. The following are five (5) tried-and-true strategies for visualizing like a pro; tips to guide you along your visualisation route:

#### Method 1

1. Be clear on your objectives: you must be clear about what you want to accomplish. It could be a specific technique you're working on or a specific incident you want to nail down. When you are specific and detailed, visualisation works best. It should be as realistic as possible.
2. Utilize more than just images: all your senses must be engaged. Visualisation encompasses more than just images; the experience must be visible, felt, smelled, heard, touched, and even tasted. If necessary, use physical actions to make it feel more real.
3. Execute it in real-time: do not attempt to hasten the process. A 200-meter race should take more than 20 seconds to complete. Similarly, if you're ticking down the seconds until the game-winning jump shot, the visuals should be in sync. The visualisation should last the same time as the actual race or event. Don't scrimp on quality. If you want to harness the power of imagination, talk to a mental game coach about incorporating this important habit into your training.
4. Practice, practice, practice! Visualisation is a skill that takes time to develop. Do it every day, make it a habit, and strive towards near reality. Mental rehearsal for athletes is a skill that improves with practice. Every day, practice your visualisation or picture.
5. Make it a routine to visualize the outcome: visualisation can help you perform much better. It can help you with both the physical and mental skills you require by mentally rehearsing your performance in your head. So, whenever you have a few quiet minutes, make it a habit to visualize your success. If you need it, take a pause and see the event as how it will unfold. If your mental images turn negative, stop the mental tape, rewind and restart, then visualize again to see the performance you want to see. Psychologists have discovered that significant mental practice is nearly as effective as the real thing, making it one of the best tools for honing your talents.

#### Method 2

##### Effective imagery and the PETTLEP model

The PETTLEP model was developed by Holmes and Collins to be used as a 7-point checklist helping athletes create more effective imagery. It was proposed that incorporating each PETTLEP element into the imagery experience will increase the similar areas of brain activation and consequently the imagery's success on the desired outcome. PETTLEP is an acronym which stands for the following different elements that should be addressed and correctly incorporated when using imagery to enhance athletic performance:

- Physical
- Environment
- Task
- Timing
- Learning

- Emotion
- Perspective

Since its creation, the PETTLEP model has been incorporated into numerous studies and results have been supportive, indicating the more elements incorporated, the more successful imagery tends to be on athletic performance. As a result, the PETTLEP model has become a well-established and popular tool used to maximize imagery's effectiveness.

#### Application using the PETTLEP model

If a Taekwon-Do team wanted to use imagery to prepare for the possibility, for example, when they are about to enter the 3rd round, to fight, after 2 draws, application of the PETTLEP model could be used as follows:

- **Physical:** The competitor could imagine being out of breath and even make themselves out of breath prior to imaging to simulate the state they would be in during a round. The imagery could then be performed in the standing position wearing their dobok and sparring kit in the same way they would when they are preparing to start the final round.
- **Environment:** The imagery performed would be in the competition venue using photographs, videos and even an audiotape of the crowd to create an environment as close as possible to the actual situation they would encounter when taking a last round.
- **Task:** The task demands attention and should be reflected in the image, so the competitor should focus internally and concentrate on factors such the area they are going to target or how they move to resolve the situation. They should include the cues they would attend to when fighting in the last round. For example, some competitors never look at the opponent in their preparation and focus only on the ground when waiting for the referee's whistle to start the round. Consequently, this should be reflected in the imaging scenario.
- **Timing:** The round preparations and execution including the walking from the chair into the centre of the ring and first kick should be imaged in real time.
- **Learning:** Each competitor's image should match their current stage of learning. Once the technique is mastered, athletes can start focusing on other elements of the image rather than how to correctly perform the task, such as the changes in emotion they would experience as they become a more accomplished and experienced competitor.
- **Emotion:** It is important that the competitor incorporates the relevant emotions they experience when they start a round, so they become familiar with these and learn to associate them with success. It is also thought that the inclusion of relevant emotion will help increase the vividness of an image.
- **Perspective:** If the competitor wants to view the technique of executing a sidekick or some other technique, they may wish to perform the imagery from an external visual perspective. However, they may prefer to use internal visual imagery when wanting to view the factors they will focus on when making their preparations for the round. As a result, each competitor should consider which visual perspective is best to adopt of the two options. It is important that during both perspectives, the athletes remember to incorporate kinaesthetic sensations associated with the task.

## WHAT COMPETITORS AND COACHES IN TAEKWON-DO HAVE TO SAY ABOUT IT

David Kerr (4x Times World Champion): *“Yes, I've used it a lot. From visualizing a technique, to visualizing it being applied in the fight, to a sequence of techniques. I also used to visualize (less often because it gave me anxiety) the atmosphere of the championship, entering the combat area, etc.”*

Sebastian Luraschi (3x Times World Champion - 3x Times World Cup Champion): *“Yes, as a competitor, I always did it. I started to do it alone without anyone teaching me and one day when a sports psychologist taught me how to do it I realized that I had already been doing it alone for several years. In Every tournament, when I was starting to warm up, I visualized myself fighting, doing all the right things and winning the fight. So from fight to fight. It helped me a lot, and it always worked for me. I think you tend to create and generate the things you visualize in your head.”*

Patricia Garelick (3x Times World Champion - 2x Times World Cup Champion): *“Yes, I used it a lot, it's a great tool. I used it once when I had already finished my training and I couldn't keep doing it, so I used visualisation as another training session. For example, 2 hrs of taekwondo training, after that the gym session and in the night I visualize, going back to the exercises I did during the day. Also close to the competition I visualize the possible matches I may, will have, and the techniques or kick I had to solve... In my opinion it's a super important tool to use, super necessary where we can use it as another training in the day or use it like a tool which will help us to fix and clean moves... in the last world cup, I have had to visualize 5 fights, and it happens to be same countries I visualized, in a different order, but the same ones”.*

Ariel Alemanno (ITF W.C. (Team) 99',07',10',12'. ITF W.C.(Indiv.) 04'Pattern 07',10'Sparring): *“I use visualisation to achieve goals and objectives, as well as to have the feeling that the objective is accomplished. I used it only as visualisation when I was a competitor and now with the feeling that the goal is accomplished as a Coach, and I do it to my athletes... I apply it in conjunction with breathing methods such as Oxygen Advantage or Wim Hof method to focus the athlete and stimulate his parasympathetic hormonal system, and make him control anxiety, panic and stimulate his confidence by his self-knowledge and management of his objective and positive thoughts. As I mentioned before, breathing is fundamental so that through scientific method, we are in line for self-knowledge.”*

Axel Vargas (3 x times world champion): *“I'll tell you, and I'll be honest, I never trained for it. But naturally before I fight I imagine the fights, what I can do and how to do it... The nights before the fights, I try not to think, only minutes before the competition. I don't know if it should be used more, I think everyone has their own way of handling it.”*

Ana Coronel (3x Times World Champion, 2x Times Junior World Champion, Member of hall of Fame ITF): *“In 1997 for the World Cup in Russia, Eduardo Palmisano used it for the first time with me. It was my first experience... Then over the years it became more common and yes before competing I used it a lot and as a coach less!!! But I did use it on special occasions... I always used it in competitions, because visualisation is putting myself in a*

*situation, seeing myself doing things, imagining different situations and how to solve them !!!!  
Each one is different, something is useful if he/she is convinced that he/she needs that, if that  
is not the case, we cannot force someone to believe in what he/she believes in.*

*Some people need a psychologist, others coaching, and it is up to you to see what tools and  
routines to add to your training, it is very personal”*

Adrian Byrne (Ireland Coach): *“it’s very real in its uses and impact. We use it quite regularly  
in many forms with our students, from young kids all the way to international level.”*

Conclusion.

It's up to us, if we decide to take the step to start working with visualisation as a tool or not,  
as we saw before, every elite athlete is working with it, we have scientific information to  
support this method, also the great advantage of this is we can use it, it doesn't matter the  
age of the competitors or how experience they are.

It's going to be a hard and slow process to be able to get the most out of it, but it's 100%  
worth it