

# SKILL VS PERFORMANCE

**Alistair Whittingham**  
investigates the age-old  
question: “Why is there a  
difference between my ability  
in competition and in practice?”



**T**hey are generally not very clear about what it is they need to practice, and more importantly what they are failing at. For most athletes, there is a misconception that the failing is within a technical aspect of their skill, when it is actually a failure in accessing that skill, i.e. in performance.

Let's take an example of a 'simple' closed skill: shooting basketball free throws or executing an archery shot. This is a complicated muscular controlled skill but it will be performed exactly the same every time. This means that the skill itself is not manipulated in execution, there is no half power shot due to close distance or decision making process as to how to best throw the ball. This skill is repetitive and is an exact set of muscular movements. So once the learning phase of skill acquisition is completed, the very best performance of a closed skill requires no application of the cognitive parts of the brain.

Work done with pistol shooters and archers in the late 1990s studying psychophysiology showed a reduction in heart rate and brain activity during the shot cycle in elite practitioners. This means that at the very highest level a closed skill is performed with no cognitive processing. In simple terms the individual does not think how they are executing the skill while performing it.

So you learn a skill that becomes as easy to perform as tying your shoelaces or

changing gear in a car. How and why does that skill degrade, or rather, why is performance under pressure poor?

To explain this we must look at a little bit of psychology. Imagine that you have 100% of resources to draw on while performing a skill (and remember that there is only 100% ever available – there is no magic 10% extra to give 110%!).

There will always be a percentage of the resource used up by the well-learned, technical skill. Think of that as being a simple program that takes up very little processing power – 20%. This percentage of the resources is always needed to perform the skill. As proficiency in the skill increases this has reduced from over 100% originally, when simple errors were made during the initial learning of the skill.

So we have 80% of resources open to us to perform before skill failure will occur because we have used up all the resources open to us.

The next major use of processing power is an emotional one: trust. This is the comfort and belief an individual has that they can perform the task. This is where doubt and nerves come in and make us concentrate on how to perform that skill.

One of the toughest tests in an advanced driving course is the performer recounting everything they are doing to the instructor. This removes the skill from a well-learned non-cognitive (some call it wrongly sub-conscious)

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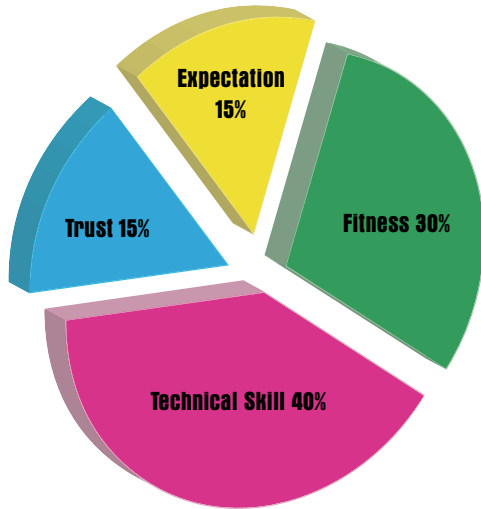
task, to one that is cognitively analysed during performance, causing failure owing to increased use of resources past 100%. It is important to point out that during performance if you use over 100% of your resources for whatever reason, it is the skill that will fail.

So trust must be worked upon. This is done in training by simulating the situations that will occur in competition as closely as possible. This must be done in training as it is a safe environment where self esteem is not harmed by failure and these failures can be studied and strategies made to overcome them.

It is therefore vital once a skill is acquired to practise in a way that mirrors the competitive sphere. This includes time constraints, shooting the same number of arrows as the rounds demand, and scoring. Where possible an individual should set themselves scoring goals for practice and seeing if they are achieving them will increase trust.

Another component that will take up resources is fitness. In order to perform a skill the individual must have a fitness level a factor of at least five times greater than is required, this is to reduce the resources used to the lowest level. So if you are going to shoot 60 arrows in competition you must be fit enough to shoot 300 arrows in a session. This is achieved in archery by volume training and fitness work such as cardio-vascular training, but remember this is about improving the performance not the skill.

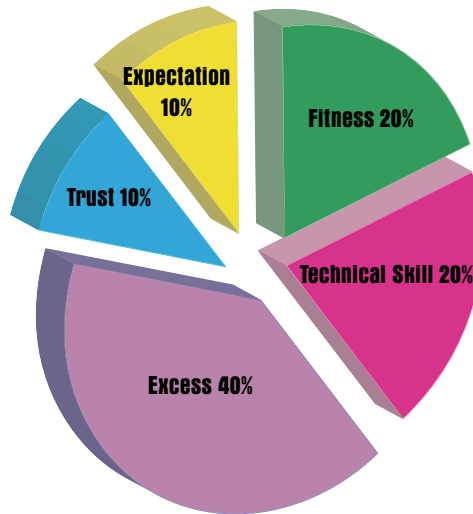
**Resource use without specific practice**



The final component is an emotional one specific to aspirations. It climbs exponentially when in competition as opposed to a normal practice scenario. This is linked to expectation.

So how can one practise for this? It must be done through tailored practice and through analysing competition performance. The feeling of stress symptoms, elevated

**Resource use with specific practice leading to excess to deal**



heart beat and sweating, as well as premonitions of failure, occur at every level of ability in performance. A novice at their first competition feels the same and exhibits the same symptoms as a performer in the final of the Olympics.

So how do you reduce anxiety? By good practice and experience. These feelings can never be removed, and they should not be,

as a level of arousal is actually required to perform well. How much, and in what form, an individual feels these symptoms is due to their personal make-up. For some, the feeling of euphoria and heightened senses is why they choose to compete and put themselves under pressure. For others these feelings of anxiety are the negative side to their competitive experience. If you feel this way then you must learn to come to terms with your feelings and not fear them. It is best to have a balance between exhilaration, that leads to a lack of control, and fear, which is paralyzing. The individual may study these emotions easily and quickly by jotting down three good things and three bad things as soon as a performance is complete. If this is done immediately after every competition, over time they will start to see trends in their behaviour that they can work on with a skilled practitioner.

I hope that these thoughts will allow you to start to understand that it is the accessing of the skill, not the technical aspects of the skill itself, that is holding back performance under pressure. If you can accept that your ability to consistently use a well learnt simple skill is not the problem, but it is the use of resources in accessing that skill under pressure which is crucial, then you will no longer say "it was so much better in practice..."