

Recent Visit and the 'Load' Question

I spent a great day with a group of practitioners recently at the Ageas Conference Centre in Southampton. Organised by the Sport Hampshire and IOW we spent the whole day looking closely at the 'Quest for Physical Literacy'.

The course is designed to help practitioners (teachers and coaches of young people) to grasp the Why? What? and How? of this important part of the journey to high performance. The Physical Competence Assessment practical was an eye-opener for them as they came to grips with the simple process of looking at selected components of a movement. It became clear very quickly that their well-developed coaching 'eye' – so well-honed over the years in their technical and tactical coaching journeys – could be used to assess a simple 'foundation' movement. Their commitment to the practical sessions (5in5, Progressive Exercise Syllabus) was immense and they certainly recognised that they need to be able to demonstrate well. As with many of these presentations I was heartened by the open-mindedness of the delegates and their commitment to the cause. Each appeared to not only want to change what they were delivering but were generally ready to 'question their assumptions'. This must give us all a very healthy future.

Just as I am heartened by meeting such people I still come across others who seem to be stuck in a paradigm. One that raises its head often is the race towards external load for the developing athlete. This is a regular phenomenon with many coaches working in contact sports being the main culprits.

Never think that I am anti-load! All my Olympic athletes and the Championship-winning football players I have been responsible for displayed great levels of maximum strength, peak force and rate of force development (RFD). I used single plane exercises (Squat, Deadlift, Clean, etc) as part of the exercise prescription and they reached formidable levels in these lifts.

My great friend Vern Gambetta summed all this up recently when he stated, *"Quality of movement, coordination and rhythm are more important. The goal is always to apply the strength that is developed in the actual sport performance. How is the force expressed? Can you produce and reduce the force? Force production is all about acceleration, but often the key to movement efficiency and staying injury-free is the ability to decelerate and stabilize in order to position the body to perform efficiently."*

Herein lies the key point of the issue – very little takes place in a sport that is not multi-joint, multi-plane and multi-directional. It is a matter of the body having to solve incessant movement puzzles on a milli-second to milli-second timeline with just the right amount of force at just the right time. These forces arrive as puzzles from anywhere on the strength continuum – from maximum strength to RFD whether producing force, reducing force or stabilising the body parts.

In the simplest of terms, strength development takes place via two pathways – Hypertrophy (bodybuilding processes) and neuro-muscular coordination improvement (the ability of the neuromuscular system to recruit motor units more efficiently in the right order at the right time). If the only tool you have in your coaching toolbox is 'Load' then you are doing a disservice to the athletes. Seldom will they be asked to produce one type of force in one plane so what is the point of only chasing external load by using limiting movements? For the Olympic Weightlifter there is little argument in this exercise selection. This single plane environment is their 'contest' so I understand their choices.

Fellow practitioner and avid 'movement explorer' Steve Myrland recently made some cute observations about the use of a bar. *"Perhaps the most persistent blunder athletes and coaches make in training to compete is regularly mistaking "strength" for "athleticism," so let's clear this up right away: Athleticism—the ability to express one's physical self with optimal speed, agility, strength, balance, suppleness, stamina and grace while avoiding injury—is the goal. Strength, as you will note by re-reading the sentence, above, is a single element of the collective term: athleticism. You cannot be athletic without being strong; but you can be strong without being athletic. Here's why: When you grab hold of a barbell with both hands, you are virtually locking yourself into the sagittal*

plane. Movement in the other two available planes of motion, frontal and transverse, is theoretically possible, but it is unlikely, at best; and if you are doing a traditional barbell exercise (squat, deadlift, snatch, clean, bench press) your body will do all it can to minimize any potential movement in those two unwanted planes. Effectively, the bar locks you into one plane and out of two. It restricts—not unlike health-club machinery.”

While we need to slowly advance the athlete along the ‘force’ pathway towards their lifetime best sports performance it must never be forgotten that this journey is tempered by one major component – movement efficiency, whether running, jumping, throwing, kicking or catching. Often described as ‘technique’, movement efficiency is the key to load progression. The load is limited by the technique which must remain optimal at all times. Too often during the chase for load we see movements compromised and the simple Clean exercise is a typical example. The Clean exercise, in my humble opinion, is a result of a carefully planned movement journey that includes ‘Hinge’ and ‘Pull’ movements as well as the ‘Triple- Flexion / Extension’ movements. Too often I see catastrophic postures and actions taking place when an inappropriate load is attempted in this exercise – usually as part of the journey to ‘winning at all ages, at all costs’.

Another point to consider is the ‘load’ itself. Seldom will an athlete have to only produce or tolerate one consistent force. Accelerations and decelerations of forces are transmitted throughout the body during movement from anywhere on the continuum that ranges from static / slow forces through to rapid peak and maximum power forces. It would seem wise therefore to construct a training process where all these forces are considered and experienced. This is where the coach goes to their toolbox and ensures that they use speed of movement (static to dynamic; slow to fast), range of movement (amplitude of movement), complexity of movement (simple to complex) to create the journey.

It’s a jigsaw – where not only does the picture change but the pieces change also.

April 2013
Kelvin B Giles MA, CertEd, AS
kbgiles@gmail.com