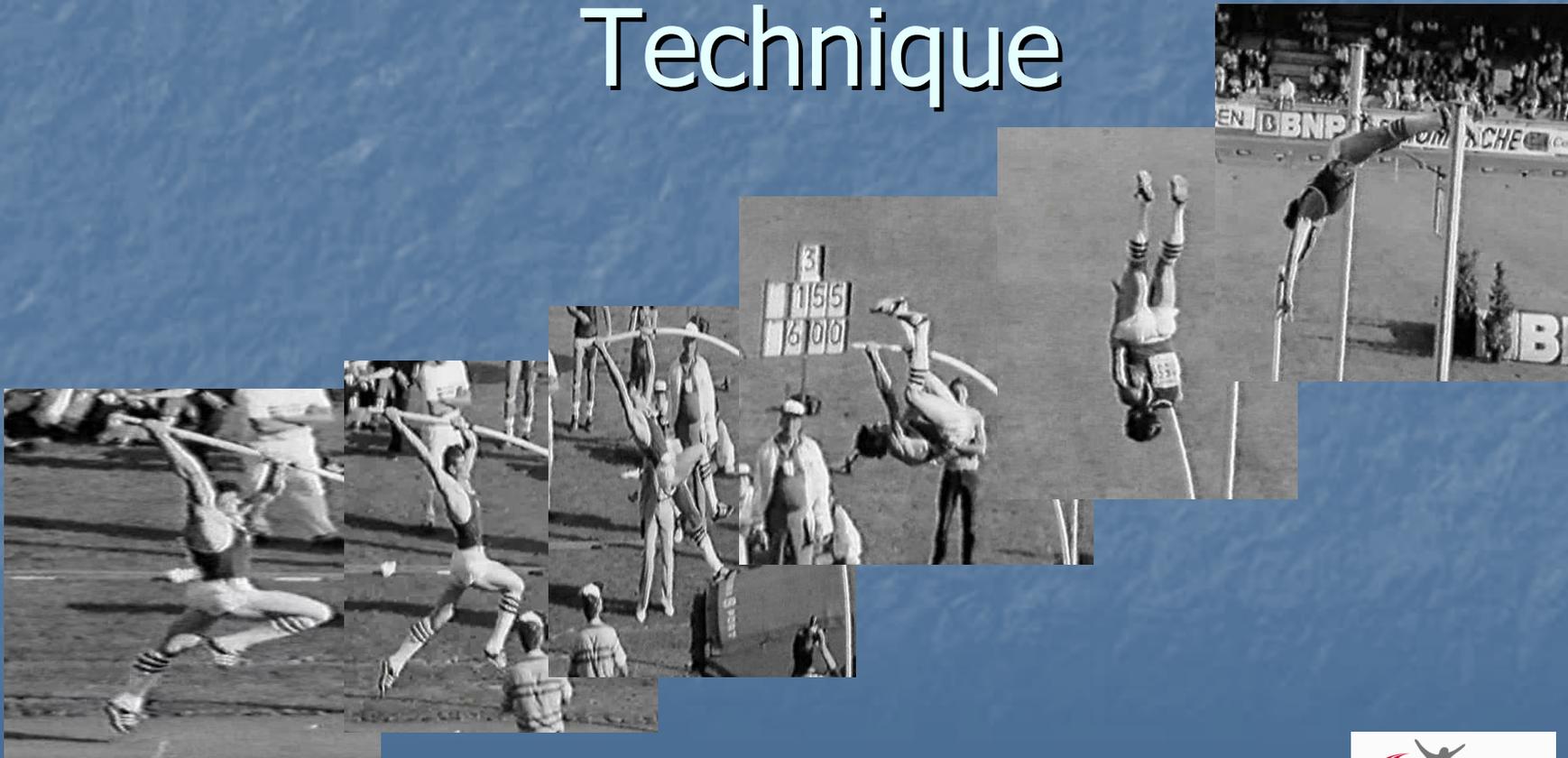


Developing Pole Vault Technique



Alan Richardson

- UKA AEIC member/ UKA level 4
- IAAF level 5 coach in jumps
- EA regional coach mentor
- Coach to a number of current junior and senior internationals
- Former 5.10m vaulter

Some Coaching Thoughts

- KISS
- Keep It Simple Stupid
- KILL
- Keep It Likeable and Learnable
- Over Coaching is one of the worst habits of coaches in competition and training



Why do drills?

- Develop the technical model by allowing the athlete to learn an individual part or parts of the vault
- Drills should closely simulate the vault where possible
- Drills should be close to the speed and timing that the athlete will experience in the vault once simple skills and competencies are learnt at lower speeds.
- Don't be a collector of drills, drills should be used to address an athletes area of need



Copyright © 1997-2007 Quintic Consultancy Ltd. All Rights Reserved

Conceptual view of Pole Vault

- The aim of Pole Vault is to vault as high as possible
- Two key elements to this –
 - Grip Height and Pole stiffness
 - Push Off



Pole Vault Concepts continued....

- Maximum height will be achieved from a combination of both of these so we should work on both in conjunction to achieve maximum results.
- Both these elements are inter-related. There is an optimum grip for maximum push while the take off success directly influences the push off due to its effect on energy transferred and therefore pole stiffness



Today will look at developing the technical model of Pole Vault

- Aimed specifically at Intermediate level vaulters who wish to progress to elite level and assumes that athletes have simple technical skills
- Broken down into 4 key areas and looks at factors affecting success, technical indicators for the coach and drills to support the technical development

4 Key Area's

- Velocity and Acceleration into take off
- Maximise Pole Ground Angle at Take-off
- From take off to maximum pole bend
- Swing to Cover the pole and inversion



Velocity and Acceleration into take off

- The single greatest influence on Pole Vault performance is take off velocity. Many studies have shown a direct correlation between the two.
- World Class Vaulters achieve take off speeds of 9-9.5m/s ([Men's Speed Data](#)) and 8-8.5 for women.

Key elements

- Grip Width
- Hand Position in pole carriage
- Pole lowering
- Upright body posture
- Foot contact position

Coaches eye

- Shoulders in line with hips or slightly in front
- Foot under hip
- Left hand above elbow
- 2 steps out – pole tip below head height but above horizontal
- Rhythm into take off



Development Drills

- Set up grip width correctly and hand position for pole carriage- running drills to be conducted with this grip
- Timing- Plants on a hurdle and onto a hurdle
- Body posture and foot contact- Run and plant over hurdles side of track and PV pit

Maximise Pole Ground Angle at Take-off-

- The first objective of every jump is to rotate the pole to the vertical, therefore the closer we can get it there before we leave the ground the better.
- The higher the grip the further away we take off and therefore the lower the angle.
- That's why tall vaulters use bigger grips.

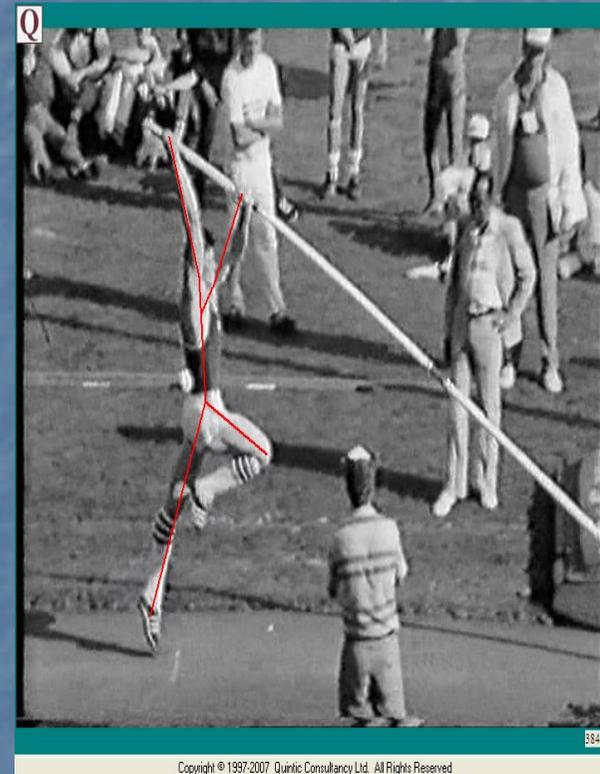


Key elements

- Right hand action- position in relation to the take off foot
- Body position- head position – eyes and chest lift to give the athlete a good jumping posture
- The athletes jump through the take off
- Take off position- free take off?

Coaches eye

- No loading of the pole
- Fully extended arms
- Full extension rear leg
- Driven free knee
- Chest inline or in front of hips



Development Drills

- Take off with a weight
- Plant to a high bar (run over hurdles)
- 1 Step Stretch and Roll
- 2 step take off on side of pit- finish between legs
- 4 steps 1 hand

From take off to maximum pole bend

- Aim here is to transfer as much energy from the approach run and take off into the pole.
- The Metronome effect
- Keep mass behind the pole cord to store more energy that can be returned to the vaulter at a later stage



Key elements

- Left hand pushing upwards and backwards and chest forwards to see the shoulder move under the hands.
- This keeps the mass lower for longer and also creates a stretch reflex in the chest for a more powerful upper body movement to follow.



Coaches eye

- Full extension of take off leg
- Shoulders are in front of the hips and underneath the hands
- Left Hand should be higher than right

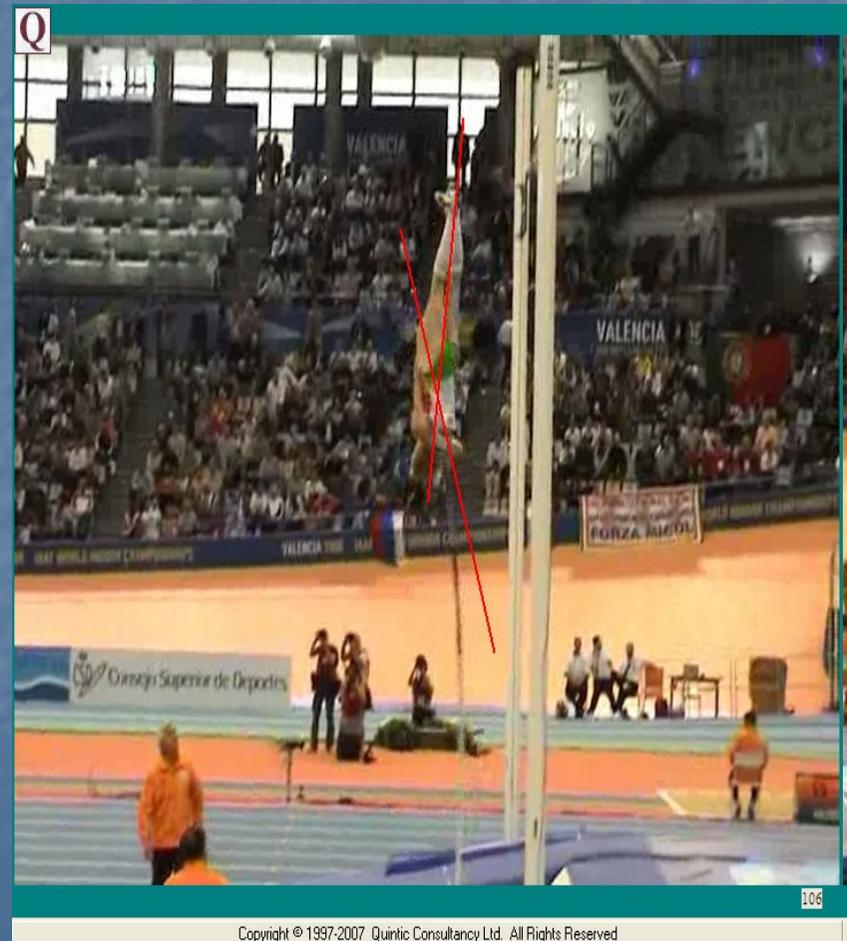


Development Drills

- 1 step take off with coach support
- Run over hurdles to Jagodin take off

Swing to Cover the pole and inversion

- The vaulter wishes to add more energy to the pole while positions their C.O.M. (hips) above the pole bend in a position where they can exploit the energy from the pole to raise the C.O.M as high as possible



Key elements

- The swing is initiated by a vigorous pressing action of the arms
- The action should be a downward action towards the back on the mat
- This will cause the hips to keep moving and rotating above the shoulders
- A vigorous and simultaneous kicking action with the rear leg will also help, with feet covering the line of the pole
- The shoulders should drive vigorously down to the mat while the hips and feet stay in line with the pole as long as possible.

Coaches eye

- The top of the pole continues to move towards the vertical
- The left leg should remain straight and the right heel in front of the left leg
- Both arms remain extended until the hands get to the vaulters knees, where only the left arm will bend
- Feet should be in line with the pole whilst the vaulter is in the L-Position
- The shoulders should always be moving downwards whilst the hips always move upwards



Copyright © 1997-2007 Quintic Consultancy Ltd. All Rights Reserved

Development Drills

- Long Swings- both over hurdles and from 8 steps
- Touches as above
- Jump onto rope and swing to inversion
- On high bar kick from Take off position to giants
- Rock backs on high bar and rings
- High pulls on HB
- Tap over and bar clearance

Coaching implications

- Choose Tall Athletes who can run fast where possible!!!
- Technical Development should develop correct take off mechanics before other area's of the vault are prioritised
- However, skill exercises that teach others area's should be included in the athletes programme
- It is critical that the physical development programme develops speed and running posture
- Core strength for the development of correct posture should also be included
- Skill gymnastics should include handstand's, swinging and exercises to teach the athlete to drop shoulders.

Questions



Thank you!

arichardson@englandathletics.org