

Mechanics of the Pole Vault

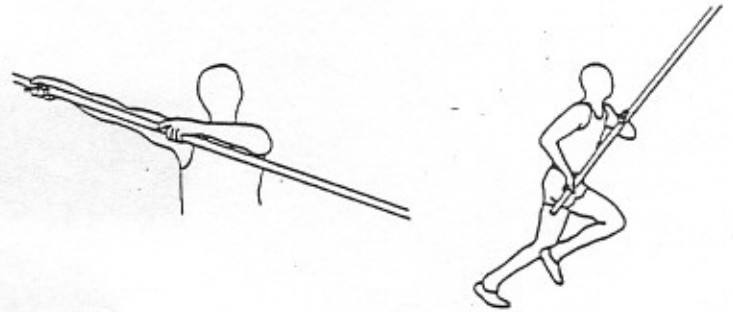
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Philosophy: To utilize a productive run-plant-takeoff to maximize pole rotation (pole speed).

Grip and Pole Carry

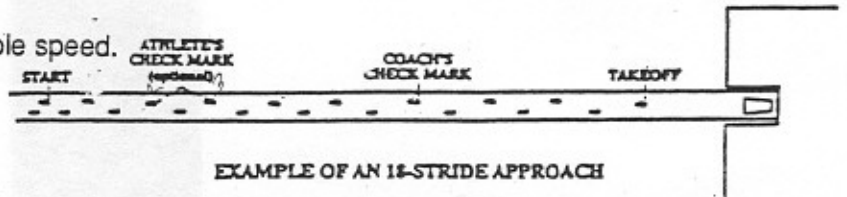
- Hand spacing
- Elbows 90°
 - Right hand at hip
 - Left hand higher than elbow
 - Tip elevated/slightly cross body



Approach

Objective: Develop maximum controllable speed.

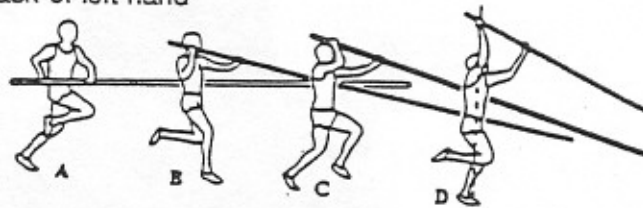
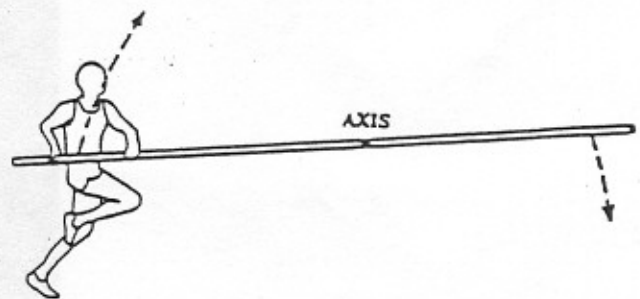
- Mercedes
- 12-20 strides
- Posture
- Uniform/rhythmic/consistent
- Check marks (athlete & coach)
- Let box come to you



Pole Plant

Objective: Relocate the arms and pole to maximize transfer of approach velocity to pole speed at takeoff.

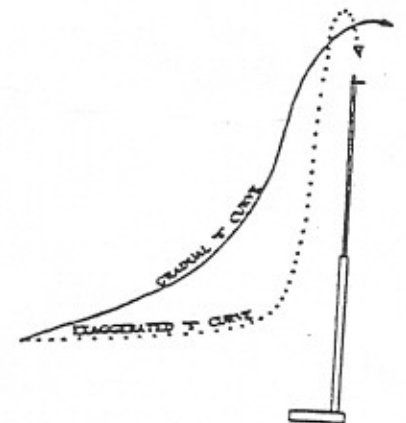
- Posture/active stride
- Pole at head height
- 2 steps (L-R-L)
- Advance pole slightly and lift back of left hand
- Teeter-totter/tip falls into box
- Penultimate step is flat
- Look upward/last step
- Stretch to the hip



Takeoff

Objective: To conserve and redirect body momentum (velocity)

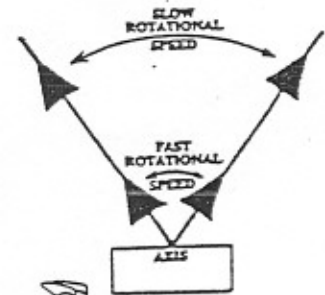
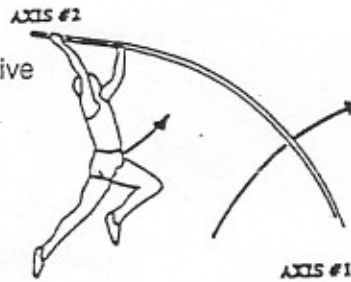
- Pole speed
- Posture
- Alignment (foot/hand)
- Jump (punt step)/simultaneous with tip-box contact
- Stay firm
- Gradual "S" curve



Swing

Objective: To place the vaulter in an effective position for bar clearance.

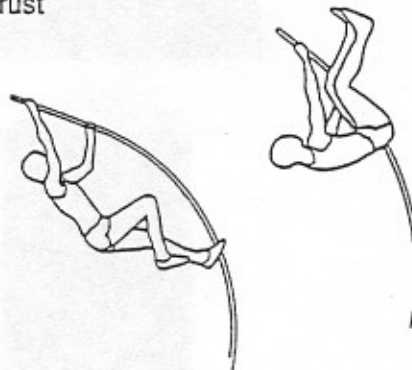
- Dual pendular movement
- Metronome
 - Long body axis
- Head alignment
 1. Top hand
 2. Shoulders



Inversion and Extension

Objective: Align body to maximize vertical thrust through center of gravity.

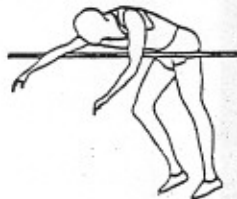
- Flex at hips and trunk
- Stay close to pole
 - Release bottom arm
- 180° rotation
- Vault in front of cross bar
- Pull & push down the pole



Clearance

Objective: Position body and limbs to avoid bar contact.

- Stay hollow



Drills/Teaching Progression

1. Pole carry
2. Standing plants
3. Walking plants
4. Jogging plants (with pole support)
5. Run & plant (short pole)
6. Supported takeoffs (3-5 step)
7. Short run swings
8. Training pole
9. Long runs/plant
10. Short run vaults
11. Long run vaults
12. Long jump technique training
13. Push.

Coaching Terms

1. 95%
2. Square shoulders
3. Run through (not to) the takeoff
4. Let the box come to you
5. Stretch to the hip (plant)
6. Don't "stab" the plant
7. Stretch up, look up, jump up
8. Head first
9. Vault in front of the bar
10. Stay hollow