Angle in – Angle out

Triple Jumping
Small – Bigger – BIGGEST

Nathan Taylor – Cornell University
USTFCCCA - 2012
• You came to this talk looking for an answer to some question(s) about the Triple Jump.

• Take a minute and write down 2 questions.

• Hopefully I can answer some of the questions.
JL Seagull.....

• Disclaimer:
  Don’t know if it’s right
  This is what I see when I watch it done
It’s a ZEN thing

• Know what you are looking at
• Watch the jump.
• See the jump.
• Be the jump.

• Feel it from the inside out.

http://www.youtube.com/watch?v=z35QkFl2tyU&feature=related (compilation)
http://www.youtube.com/watch?v=d75syqfhUqM (Women)
Getting to the board the right way

• High velocities are important but put a premium on accuracy and strength and technique parameters

• Proper Drive phase mechanics and acceleration patterning create a maximum/repeatable stride pattern

http://www.youtube.com/watch?v=hAC1qLiJSA8 (Johnathan Edwards)
• Posture, balance and mobility are keys to maximizing proper take-off mechanics

Note: After the run - Hop is 1st and most critical component. Analyze your athletes to determine most coordinated leg and hop on that one.
• Premium on timing of contacts – Most athletes have a side that works and one that doesn’t.
• Important implications for greater bi-lateral training/jumping.

http://www.youtube.com/watch?v=KrVRyNg-oU&feature=related (Edwards 18.43)
Angle in - Hop Phase

• Runway speed influences vertical impulse requirements. Slow, but powerful jumpers can have bigger angles into take off and thus bigger angles out to flight phase.

• But, this requires significantly more strength and perfected ground contact mechanics.
Angle out – Hop Phase

• Proper arm movements have large influence on creating long take off leg, bigger dynamic stretch reflex and subsequent angles.

• Maintaining excellent posture important for generating maximal forces

http://www.youtube.com/watch?v=vfAITGsoQXA (Christian Taylor, Worlds) :42-50
Angle In – Step Phase

• Slower speeds into step landing allow for greater angles in to maximize useable height in jump phase

• Sweeping arms back and pressing heel out creates opportunity for maximum extension and negative foot speed before contact.

• Posture and head position critical here
- Cornell TJ stats:

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<th>Athlete(wgt)</th>
<th>HS PR</th>
<th>PR</th>
<th>30 fly (a)</th>
<th>30 stand(h)</th>
<th>squat PR</th>
<th>Clean PR</th>
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<td>Pollack(172)</td>
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<td>Averages:</td>
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Developing capacities

- Strength
- Speed
- General Technique
- Refining Technique at HIGH SPEEDS
  - This is the tough one. Hit or miss leads to OJW’s
  - One Jump Wonders – or whoa, that was pretty good. How’d that happened?
Increasing speed parameters

• We know Triple Jumping is like a car accident.

• We know a longer run-up increases speed.

• We know it’s hard to get really psyched in practice.
• Develop drills and exercises that focus on
  1) Posture
  2) Big front side mechanics
  3) Fast – down and pulling activity

It’s all about pulling back
It’s not about pushing off
Challenge

• There’s no good way to full run jump in practice so how would you simulate ground contact speeds in practice?
• Muhammad Halim –
  http://www.youtube.com/watch?v=2mnlgBjl74I (Muhammad)

• Hasheem Halim – ie. Superman?
  http://www.youtube.com/watch?v=J-ISvHCGHvc (Hasheem)

• How about this guy?
  http://www.youtube.com/watch?feature=endscreen&v=es9rTuUb1-w&NR=1 (Hurdle fun)
• Here’s how I’ve solved this problem

• Over-speed or assisted bounding.
  – The contacts are very fast based on the run in distance/speed
  – Places a higher premium on great technique
  – Different, Challenging, Fun, Exciting
- [link](http://www.youtube.com/watch?v=hAC1qLiJSA8) (Johnathan Edwards)
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- [link](http://www.youtube.com/watch?feature=endscreen&v=es9rTuUb1-w&NR=1) (Hurdle fun)
- [link](http://www.youtube.com/watch?v=J-ISvHCgHvc) (Hasheem)
- [link](http://www.youtube.com/watch?v=vfAlTGsoQXA) (Christian Taylor, Worlds) :42-50
- [link](http://www.youtube.com/watch?v=LfhnPDx1Iy0&feature=related) (El Sheryf) 58-1:08
- [link](http://www.youtube.com/watch?v=d75syqfhUqM) (Women)
- 1:00- 1:08, 4:00-4:20, 5:05- 5:20, 7:50-8:00, 8:28-8:48
- [link](http://www.youtube.com/watch?v=STsv-dQ_DQ0) (Games)
- :45-1:20
- [link](http://www.youtube.com/watch?v=2mnlgBjl74I) (Muhammad)