

Throwing the Discus: Start to Finish



“ The little things in life matter. If you can’t do the little things right, you can never do the big things right.”

~ Admiral McRaven

“Great leaders must walk the halls slowly.” ~Dr. Maxwell

Overview

- This technical model is meant to scale down the movements to the essential minimums.
- The objective is to restrict variables and create consistency and efficiency in movement. (This is very important under competitive stress).
- Each athlete has specific skill sets/abilities; it's our job as coaches to accommodate those differences.

Overview

- Philosophy / "Technical Model"
- 7 Key Applications of Technical Progression
- Teaching progression.
- Specific drill exercises.

“Great vision without great people is irrelevant.”

~Jim Collins

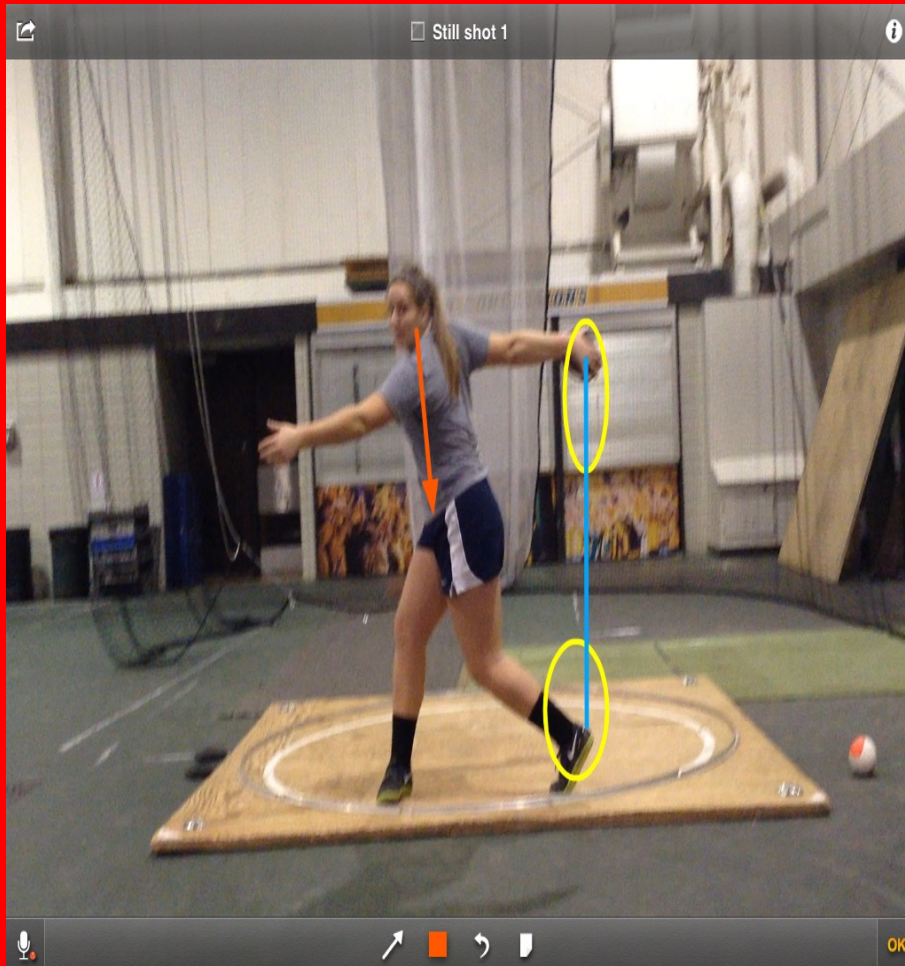
7 Key Applications of Technical Progression

- Starting Position
- Preliminary Swings
- Initial Movements/Turn
- Linear Sprint-Drive
- Power Position
- Delivery
- Recovery- Non Reverse/ Reverse

Starting Position

- Vertical with hips tucked under athlete.
- Shoulders are level at all times.
- Make sure hips are strong and stable.
- Discus lined up with left foot.

Wind



- Make sure the low point of discus is straight in front of you.
- Wind the discus not the body
- Weight is shifted from left to right, but is mostly centered between feet.
- Breath in at the end of the backswing.
- Separation between arms is very important.
- Head follows your shoulders.

Initial Movement



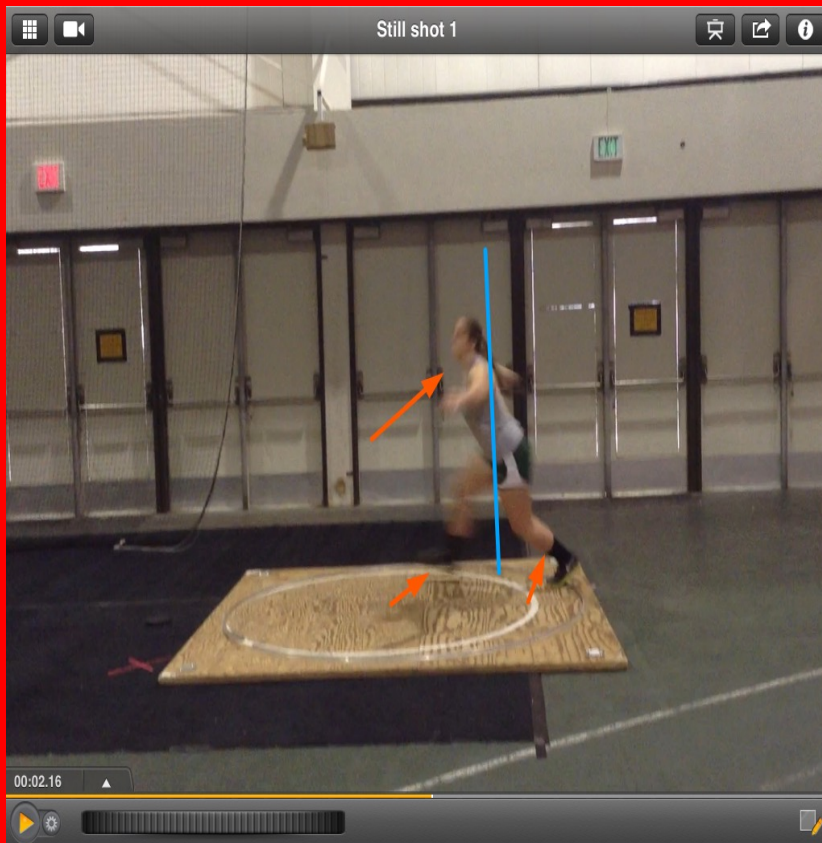
- Shift center of mass prior to upper body.
- Think heel, hip, shoulder relationship with an imaginary pole when pivoting around the axis.
- Pivot with the inside of the foot from low to high the farther you turn.
- Right foot stays fixed and is taken out very wide later on.
- Lead with the inside of the leg, lift right knee, for greater load of the left.

The Turn "Pivot"



- Turn the left foot heel out and inside of foot. Do not roll around it.
- Create a reverse V position in the back of the circle.
- Get on the toe of the right foot and allow center of mass of thrower (CMT) lead into the center of the circle.
- Lead with the inside of the right thigh with right foot open.
- The left knee/ shin goes down towards the circle.

Sprint



- Left shoulder axis in relationship with left foot turn and wide right leg.
- Create the second reverse V position.
- Go slightly backwards into the sprint.
- Stay high on your toe on the left foot.
- Thrust your COM with a wide right leg.
- Left leg moves quickly in an automatic fashion toward the front of the circle.
- Keep throwing arm down in the sprint phase.

Power Position



- Land with arm back and high point towards the left sector line.
- Left arm slightly bent and in front of you.
- Left foot lands open with the whole sole of the shoe down.
- Right foot high on the ball of the foot.
- The fourth reverse V position is created here. Putting legs in a dynamic position.
- Look level to avoid lateral deviation
- CM is under you, not breaking.

Release

- Discus is kept away from body long and relaxed shoulder.
- Hit the brick wall with entire left side.
- Torque and tension is built up during the throw to be released at the end.
- Right leg turn and push. In that order.
- Maximum speed is most important at the moment of release.
- Fight the reverse by standing long on the ground with both legs.
- The reverse happens as late as possible.
- The release should be automatic.

Delivery Stacked and Level



NCAA Championships 2nd Place



Non Reverse 57.92m
/190ft



Non Reverse 55.17 /181



Reverse 55.62m/182.6



Discus Orbit (Path)

- At conclusion of last preliminary swing the discus is high.
- Discus path from high to low around back of circle.
- As thrower drives to center of circle discus rises.
- High point to the right of the center line.
- High Point at approximately 12:30.
- Low point at approximately 6:00.
- Release at approximately 1:00.

Perfection is not attainable, but if we chase perfection we can catch excellence.” ~ Vince Lombardi

Drills

- Pivot drills 90, 180, 360, 360+, (working on balance, timing).
- Throwing cones, sticks, bowling pins (working radius, high low points and delivery sequence). Progression is consistent stands non then reverse, walking throws, full throws
- Continuous line work walking moving towards rhythm and tempo (working on direction and timing).
- Overhead exchanges down a line (working complete pivot actions from ground up, being square).
- PVC Pipe work (working on summation from ground up, separation). Progression is consistent stands non then reverse, walking throws, full throws

Pivot 90



Pivot 180



360 Pivot



Towel Drill



Pivot Step In



Pivot + Step In+Wheel



Walking Full



“There are no secrets to success: don't waste time looking for them, success is the result of perfection, hard work, learning from failure, loyalty to those for whom you work and persistence”. ~Collin Powell

Technical Model/Philosophy

- Balance
- Direction
- Rhythm
- Acceleration and Velocity

Balance/Posture

- The thrower must develop proper static as well as dynamic posture.
- Balance is crucial to the final result of the throw. Loss of balance generally inhibits the proper rhythmic acceleration of the thrower/implement system.
- Poor balance often results in reducing the application of force during the delivery sequences. Thus, it's essential to maintain a balanced axis throughout the entire throw with efficient posture.

Direction

- Efficiency /Consistency in setting up forces in the throwing direction will aid the development of the athletes spatial/kinesthetic awareness.
- The athlete should have a clear understanding of the desired direction.
- **Forces produced must be in the right direction.**

Rhythm

- The thrower should learn, establish, and utilize consistent rhythmic structures/patterns within the movements of the throwing actions.
- When using rhythmic and temporal cueing most athletes suffer a much lower rate of degradation due to stress (competition).
- Movement patterns are learned and reinforced (through repetitions).

Range of Motion

- The thrower should maximize use of the range of motion of involved lever/ joints, appendages during the application of force on the implement.
- Generally, the longer the path of the application of force, the better the result.

Acceleration and Velocity

- Acceleration is the rate of the positive change of velocity with respect to time.
- The athlete should be encouraged to seek smooth and continuous acceleration.
- The final distance thrown is largely a result of the velocity of the “implement” at release.

What to Watch (Side View)

- Posture at wind, initial movement and sprint.
- Left foot push-off out of the back.
- Right leg action to middle.
- Right foot under knee in the sprint-drive.
- Right foot turning as it lands in middle of circle.
- Upper body remaining on back half of circle in the power position.
- Left side block, allowing the right side to come through at release.

What to Watch (Rear View)

- Is the athlete getting over their left side out of the back of the ring?
- Is the discus staying out to the right through the linear sprint-drive and delivery?
- Does the athlete create much torque from the wheel turn?
- Are the athlete's feet properly aligned in the power position?
- Are the athlete's feet staying grounded as long as possible in the delivery?

“One of the great mistakes is to judge programs by their intentions rather than their results”

~Milton Friedman

Thank You

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