

# High Jump Approach Development

Cliff Rovelto  
Head Track & Field Coach  
Kansas State University

# Foundational Belief

The approach is the most important aspect in establishing  
a consistent and reliable technique

# An effective approach possesses the following items:

1. Acceleration – proper mechanics
2. Rhythm
3. Tempo
4. Posture
5. Running mechanics – straight and curve

# The approach is unique to each individual

1. Number of steps
2. Radius of curve
3. “J”, hook, flared approaches

# Approach Goals

1. Create lean
2. Lower center of mass
3. Facilitate maintenance of frequency

# Curved Run-Up Advantages

1. The resultant lean towards the center of the curve aids in lowering the center of mass in the final steps of the approach.
2. Allow the athlete to generate rotation without having to lean toward the bar at the end of the take-off phase.

# Curved Run-Up Concerns

1. More difficult to learn as it is more complex than simply running in a straight line.
2. The potential for inconsistency due to the varied path the jumper could take to the bar.

# Approach Building

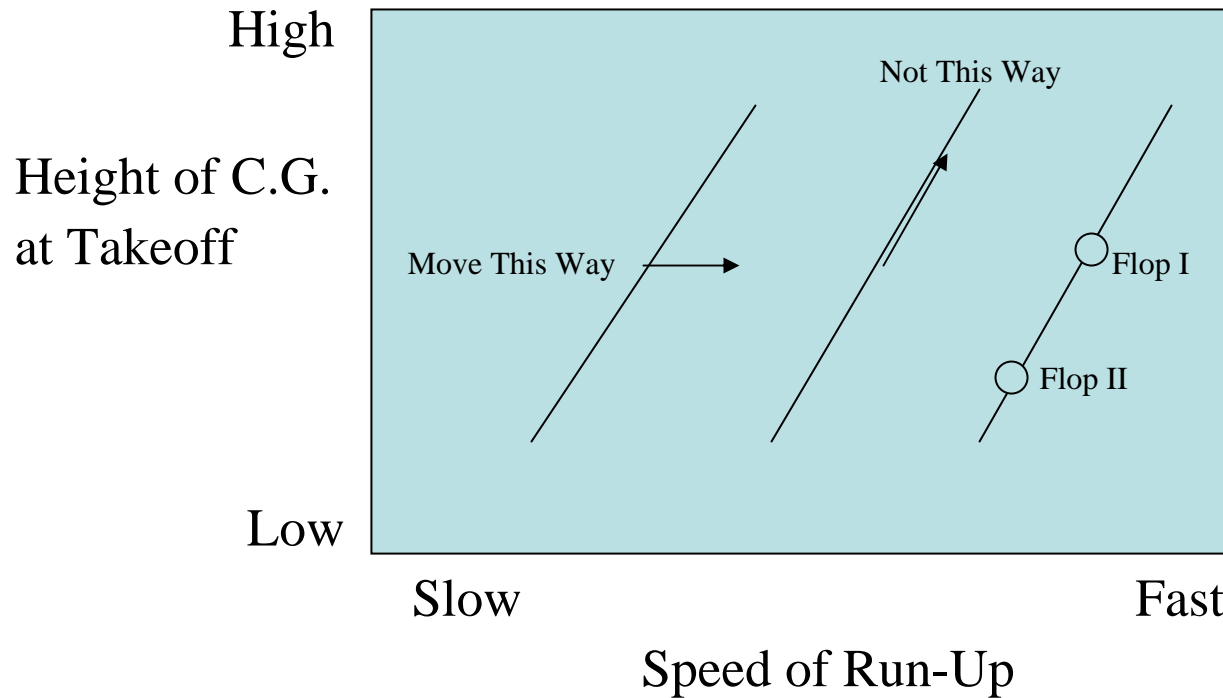
Path of the center of mass in the last two steps in relation to the bar.

# Radius of Curvature

1. In theory, if the radius is too small, the athlete will have greater difficulty in running the curve. If the radius is too large, the athlete will not have as much lean toward the center of the curve.
2. The optimum radius is dependent upon the speed of the jumper, strength, curve running mechanics and posture.
3. Most high jump literature calls for an optimum radius of 7 – 10 meters for female jumpers jumping at heights at or above 1.80 meters.
4. Most high jump literature calls for an optimum radius of 10 - 15 meters for male jumpers jumping at heights at or above 2.20 meters.

# Flop I (Speed) vs Flop II (Power) Floppers

## “A Question of Style”



Time spent on ground ranges from .14-.21 secs w/ elite jumpers

# My Philosophy – “Push the Limits”

Our goal is to run technically correct in a tight curve allowing for optimal lean and necessitating great speed to maintain pressure against the ground.

# Veladrome



# Steps in Building Approach

## 1. Prerequisites

- A. Acceleration Drills
- B. Running Mechanics
- C. Curve Running Mechanics
- D. Posture
- E. Rhythm
- F. Tempo

# Basic Model for Developing the High Jump Approach

1. Have the athlete run 10 steps in a straight line with the speed he/she feels they can handle to execute a jump. The tenth step should be marked with chalk or tape and the average should be taken of 4 – 5 trials.
2. Have the athlete continue to run 10 steps on a straight in the same manner, marking the fifth step. Measure the average of 4 – 5 trials.
3. Have the athlete run a curve that feels comfortable to them, initiating the curve on the fifth step. Establish a takeoff point from the average of 4 – 5 trials.

# Basic Model for Developing the High Jump Approach (Cont.)

4. Measure from the takeoff point out parallel to the imaginary bar and from this point extend to the mid and to the starting point which should be perpendicular to imaginary bar. The athlete now has three marks to transfer to the apron.
5. The coach and athlete should determine the take-off point on the apron and measure from this point.
6. The athlete should then run the approach on the apron with the pit and standards in place making adjustments as needed.

# Basic Model for Developing the High Jump Approach (Cont.)

## 7. Things to look for

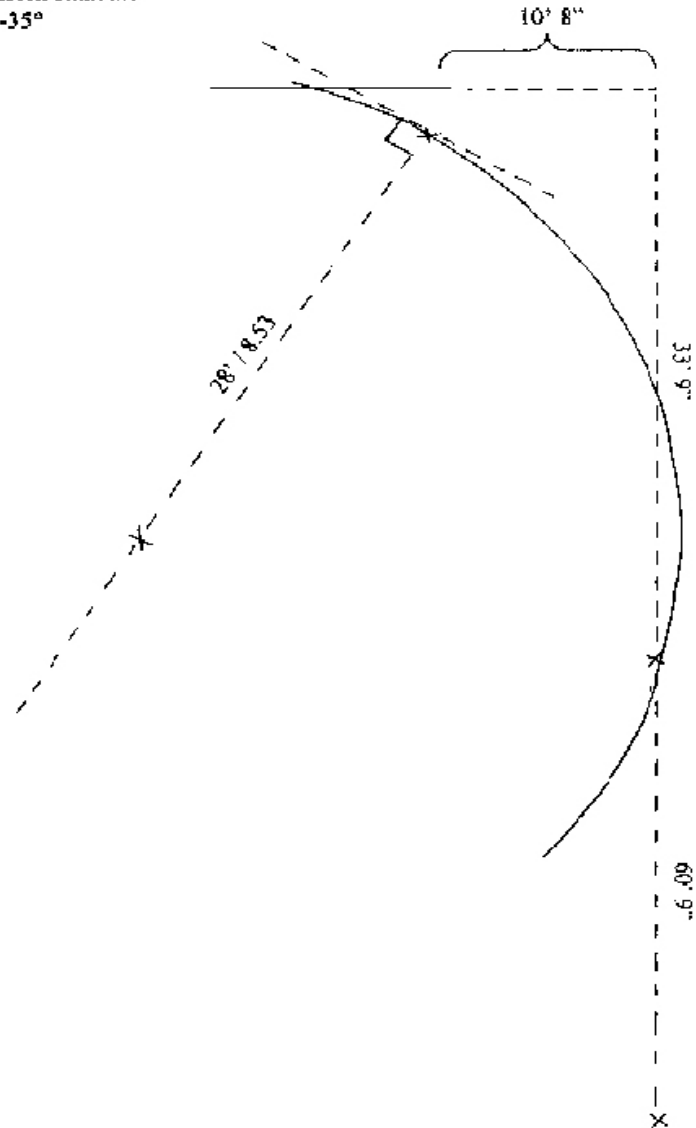
A. Ten step on straight should be close in distance to what we end up with after running curve; that is, the distance from baseline to starting point.

B. The mid-mark should be close to half of this ten step distance.

## 8. Determining radius of the curve.

# Gwen Wentland 1/13/05

TO 3' out 1' in from standard  
Attack angle ~ 34-35°  
10 steps



# High Jump Drills

S Runs

Curve Runs

Circles

High Jump Video:

Kyle Lancaster

Scott Sellers

Matt Hemingway