

Maximizing Hurdle Talent: Be an Artist

Charles W. Ryan III
Academy of Art University



“Hurdling is art, more like dance. It is a *individual* expression of poise, finesse, speed, and power blended together in a particular sequence of when and how much to use of each.”

- Anonymous



Science & Techniques

The Nuts and Bolts



Phases of Hurdling

(Dr. Ralph Mann, Ph.D.)

- ✧ Reaction time (Gun to first movement)
- ✧ Acceleration
 - ✧ Start
 - ✧ Two Leg Drive
 - ✧ One Leg Drive
 - ✧ First Step
 - ✧ Second Step
 - ✧ Transition to the hurdle



Phases of Hurdling Con't

(Dr. Ralph Mann, Ph.D.)

- ✧ Hurdle Clearance
 - ✧ Ground Contact Into
 - ✧ Air Time
 - ✧ Ground Contact Off

- ✧ Sprint Between Barriers
 - ✧ Step One
 - ✧ Step Two
 - ✧ Step Three

- ✧ Sprint From Last Hurdle



Hurdle: Rule Demands

(Dr. Ralph Mann, Ph.D.)

	110 M	100 W	400 M	400 W
Hurdle Height	42.0 in	33.0 in	36.0 in	30.0 in
Hurdle Spacing	9.1 m (30.0 ft)	8.5 m (27.9 ft)	35 m (114.8 ft)	35 m (114.8 ft)
Step Pattern (Preferred)	3 steps	3 steps	13 steps	15 steps
Step Length Between	1.83 m (6.0 ft)	1.87 m (6.1 ft)	2.44 m (8.0 ft)	2.13 m (7.0 ft)



Hurdle: Rule Demands Con't

(Dr. Ralph Mann, Ph.D.)

	110 M	100 W	400 M	400 W
Hurdle Height to Leg Length	122%	100%	103%	91%
Actual Height Raise to Sprint Rise	419%	292%	333%	293%
Required Height Rise to Sprint Rise	409%	120%	232%	100%
Steps Between to Sprint Length	89%	93%	109%	112%



“For the ENTIRE race, the key to performance is the creation of EFFECTIVE Force Application.

The Final barrier to success lies in the ability of the athlete to produce the force required to create sufficient Air Time in the available Ground Time.”

- Ralph Mann, Ph.D.



No Magic Tricks

Theory:

“There is more than one way to skin a cat.”

Reality:

Focusing on what is optimal.



Hurdle Technique

Drills: When/Why to use them?



Posture and Body Position



Sprint Technique

Hurdles is a SPRINT



Sprint Technique

Start Mechanics, Steps & Fads



The Art within the Science



“Science is only useful if it makes
the Coach a better Artist.”

- Bill Sweetenham



Train the ATHLETE not the event



Teaching and Developing:

Athlete = Canvas

Coach = Artist

Creativity to Individualize



My Influences



- ✧ UCLA 1999-2002
 - ✧ Jon Smith (HSI)
- ✧ South Carolina 2002-04
 - ✧ Curtis Frye (2013 USTFCCCA HOF Inductee)
- ✧ Knoxville, TN 2004-07
 - ✧ Vince Anderson (Texas A&M)
 - ✧ Jacquelyn Coward / Track Knoxville
 - ✧ ESPN Rise All-Decade All-American
 - ✧ 55mH – 7.67, 60mH – 8.17, 100mH - 13.23, 300mH – 40.85, 400mH 57.20 << HS Junior
- ✧ Louisiana Tech University 2007-10
 - ✧ Antoinette Cobb
 - ✧ 2010 Honda Inspiration Award: 100mH – 13.03
- ✧ Academy of Art University (2010-Present)
 - ✧ Vashti Thomas
 - ✧ USTFCCCA DII Indoor AOY (60mH-8.11)
 - ✧ 100mH - 12.61
 - ✧ Briana Stewart (13.03), Julian Purvis (13.13), Dinesha Bean (13.31), Jesseka Raymond (13.54)
 - ✧ NCAA Record Setting Shuttle Hurdle Relay (52.50)
 - ✧ **NCAA 2013 Indoor/Outdoor National Champions**



**“Live every day in a constant state
of evolution.”**

- Charles W. Ryan III

