Maximizing Hurdle Talent: Be an Artist

Charles W. Ryan III
Academy of Art University
“Hurdling is art, more like dance. It is an *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.)*

<table>
<thead>
<tr>
<th></th>
<th>110 M</th>
<th>100 W</th>
<th>400 M</th>
<th>400 W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hurdle Height</strong></td>
<td>42.0 in</td>
<td>33.0 in</td>
<td>36.0 in</td>
<td>30.0 in</td>
</tr>
<tr>
<td><strong>Hurdle Spacing</strong></td>
<td>9.1 m</td>
<td>8.5 m</td>
<td>35 m</td>
<td>35 m</td>
</tr>
<tr>
<td></td>
<td>(30.0 ft)</td>
<td>(27.9 ft)</td>
<td>(114.8 ft)</td>
<td>(114.8 ft)</td>
</tr>
<tr>
<td><strong>Step Pattern</strong></td>
<td>3 steps</td>
<td>3 steps</td>
<td>13 steps</td>
<td>15 steps</td>
</tr>
<tr>
<td><strong>(Preferred)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step Length Between</strong></td>
<td>1.83 m</td>
<td>1.87 m</td>
<td>2.44 m</td>
<td>2.13 m</td>
</tr>
<tr>
<td></td>
<td>(6.0 ft)</td>
<td>(6.1 ft)</td>
<td>(8.0 ft)</td>
<td>(7.0 ft)</td>
</tr>
</tbody>
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Hurdle: Rule Demands Con’t

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<tr>
<td>Hurdle Height to Leg Length</td>
<td>122%</td>
<td>100%</td>
<td>103%</td>
<td>91%</td>
</tr>
<tr>
<td>Actual Height Raise to Sprint Rise</td>
<td>419%</td>
<td>292%</td>
<td>333%</td>
<td>293%</td>
</tr>
<tr>
<td>Required Height Rise to Sprint Rise</td>
<td>409%</td>
<td>120%</td>
<td>232%</td>
<td>100%</td>
</tr>
<tr>
<td>Steps Between to Sprint Length</td>
<td>89%</td>
<td>93%</td>
<td>109%</td>
<td>112%</td>
</tr>
</tbody>
</table>
“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