

Elite Performers – Post Junior to the Peak Performance Years. How to work on technique?

WORKSHOP C Combined Events SAT 11,30

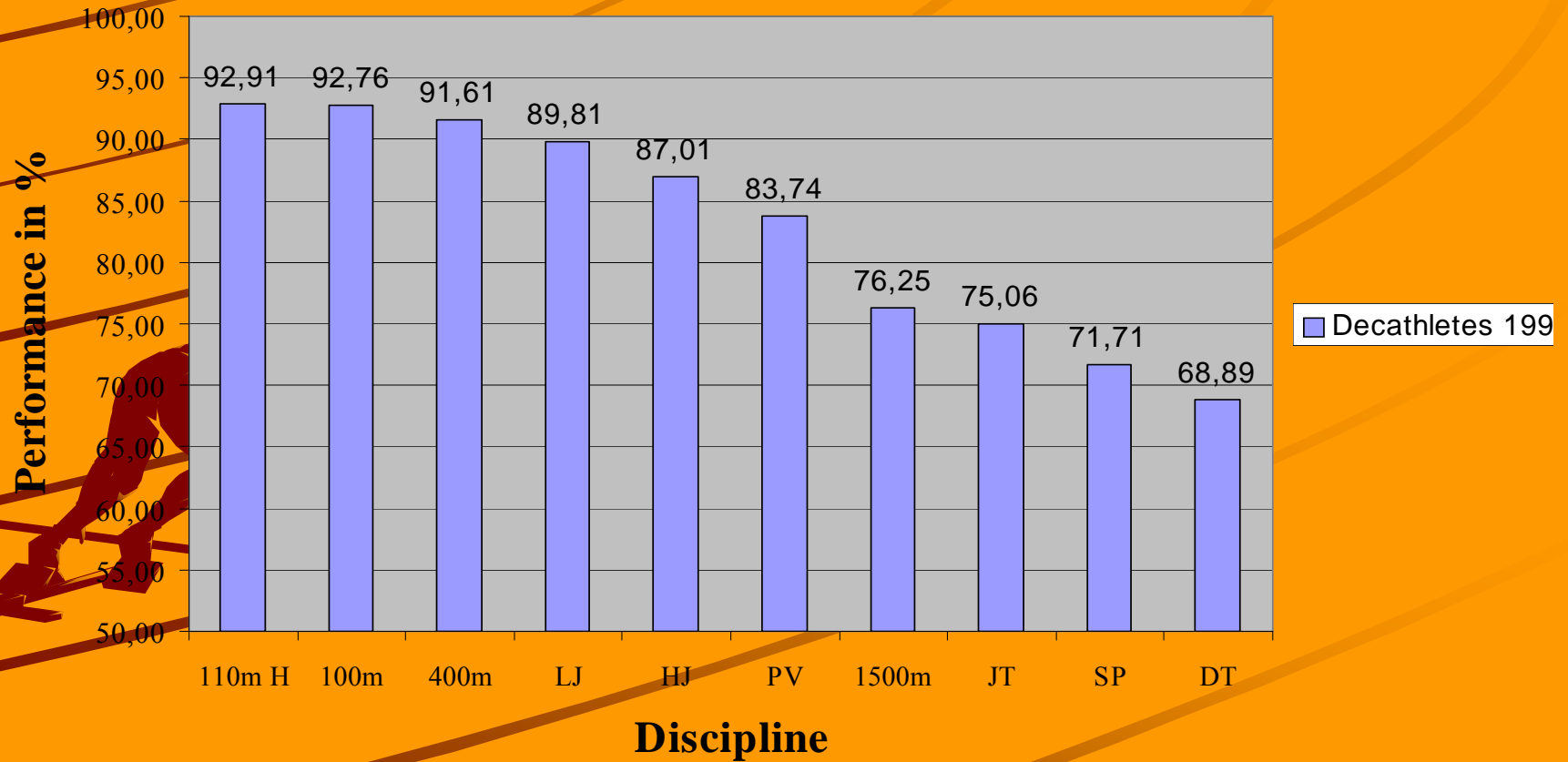
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Dublin, November 2006



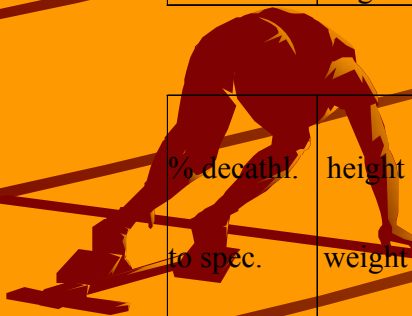
The Performance Capacity of Decathletes as Related to Specialists in Sevilla 1999



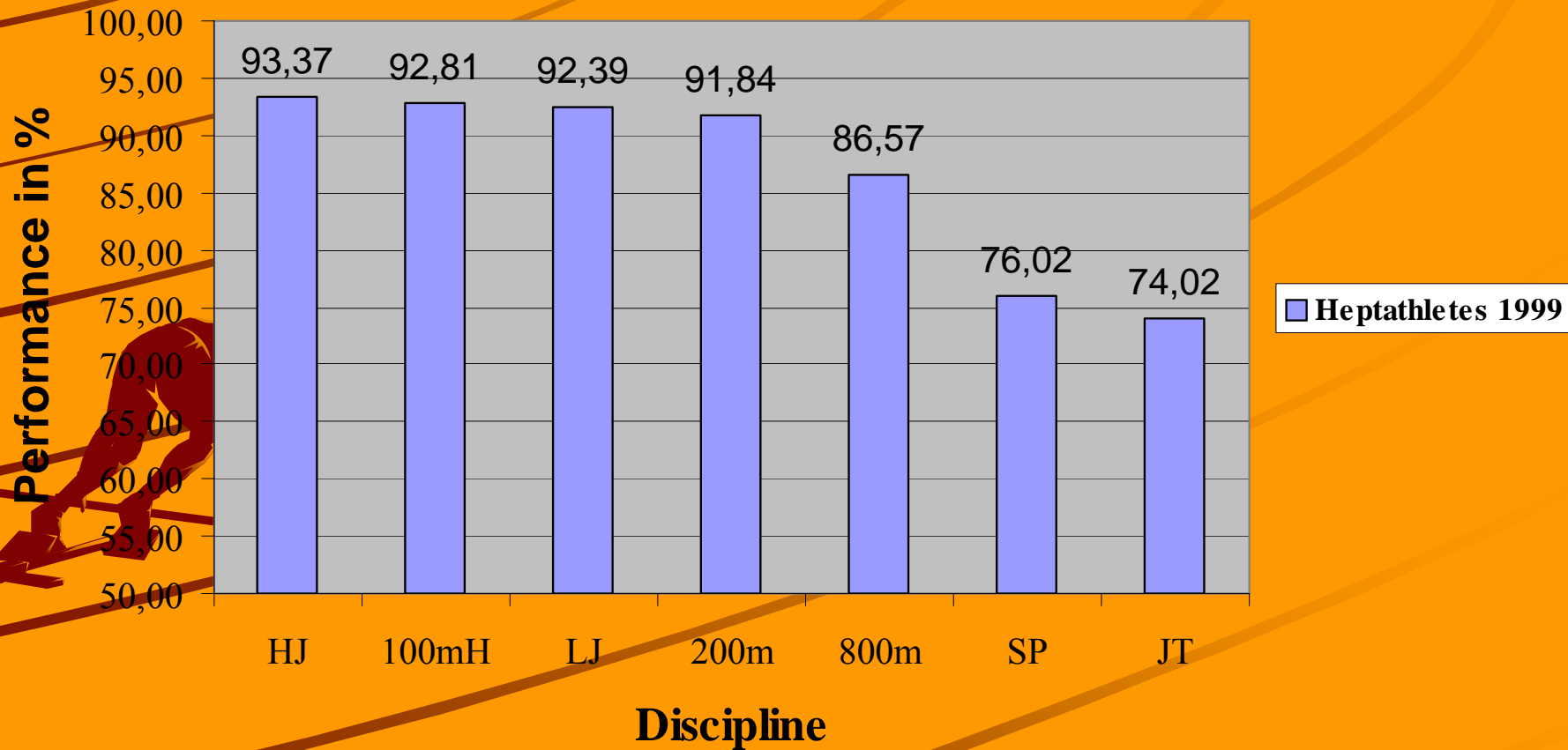
Characteristics of Decathletes as Related to Characteristics of Specialists in Sevilla 1999

		DEC	100m	LJ	SP	HJ	400m	110H	DT	PV	JT	1500m
finalist \bar{x}	height	1,88	1,79	1,79	1,92	1,91	1,83	1,88	1,95	1,87	1,90	1,78
	weight	83,9	77	72,8	124	76,9	76	80,4	115	78,3	94,9	62,5
	age	28,1	25,0	24,1	30,0	25,7	27,0	27,9	32,3	26,3	27,8	28,0

% decathl. to spec.	height	105,0	105,0	97,9	98,4	102,7	100,0	96,4	100,5	98,9	105,6
	weight	109,0	115,2	67,8	109,1	110,4	104,4	73,1	107,2	88,4	134,2
	age	112,4	116,6	93,7	109,3	104,1	100,7	87,0	106,8	101,1	100,4




The Performance Capacity of Heptathletes as Related to Specialists in Sevilla 1999



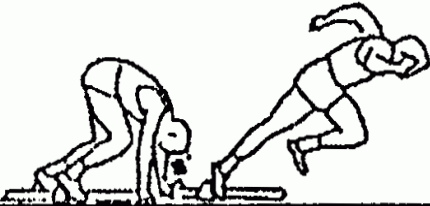


Characteristics of Heptathletes as Related to Characteristics of Specialists in Sevilla 1999

		Heptath	100mH	HJ	SP	200m	LJ	JT	800m
finalist \bar{x}	height	1,77	1,67	1,80	1,85	1,70	1,73	1,73	1,68
	weight	63,5	56,5	59	89,7	58,6	57,9	71,6	58,8
	age	28,8	29,4	26,1	27,4	27,1	28,0	26,6	28,6



%finalist heptathlon to finalist individual	height		106,0	98,3	95,7	104,1	102,3	102,3	105,4
	weight		112,4	107,6	70,8	108,4	109,7	88,7	108,0
	age		98,0	110,2	105,1	106,3	102,9	108,3	100,7

Sprints

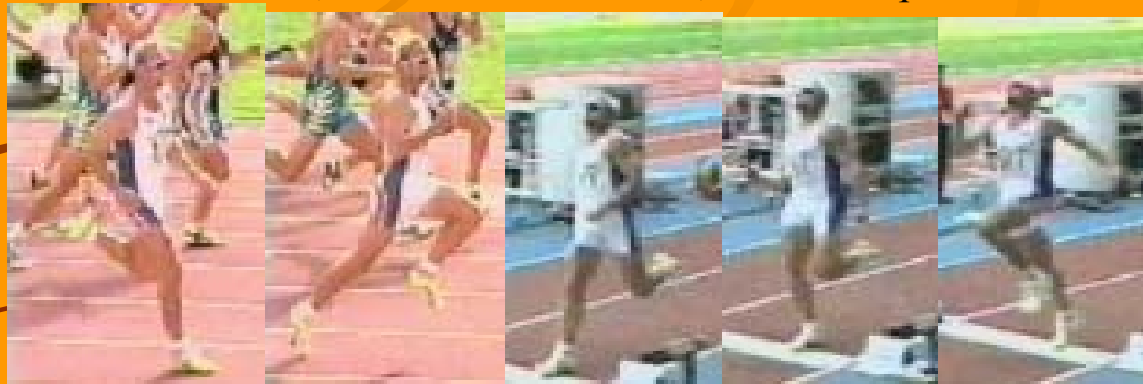
Reference	Discipline	Duration	V	V ₀
Sprints		160/340 ms	-	3 m/s
		80 ms	12.1 m/s	-
		120/75 ms	9.3 m/s	-

Sprinting Technique and Long Jump Take-off Technique Sevilla 1999

Tomáš Dvořák

100 m 10,60 s /+0,1/

7,98 m 1. attempt



Chris Huffins

100 m 10,43 s /+0,1/

7,35 m 1. attempt





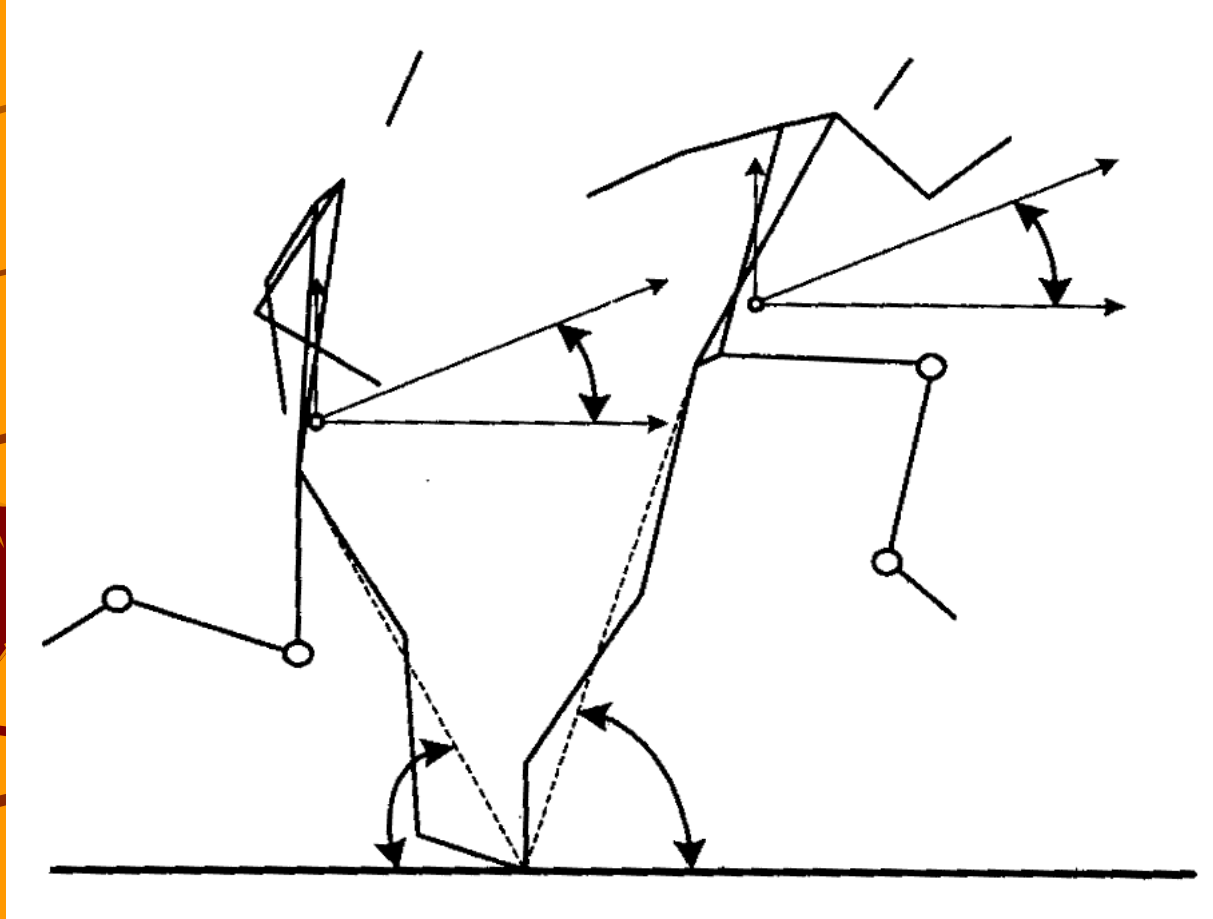
Front support

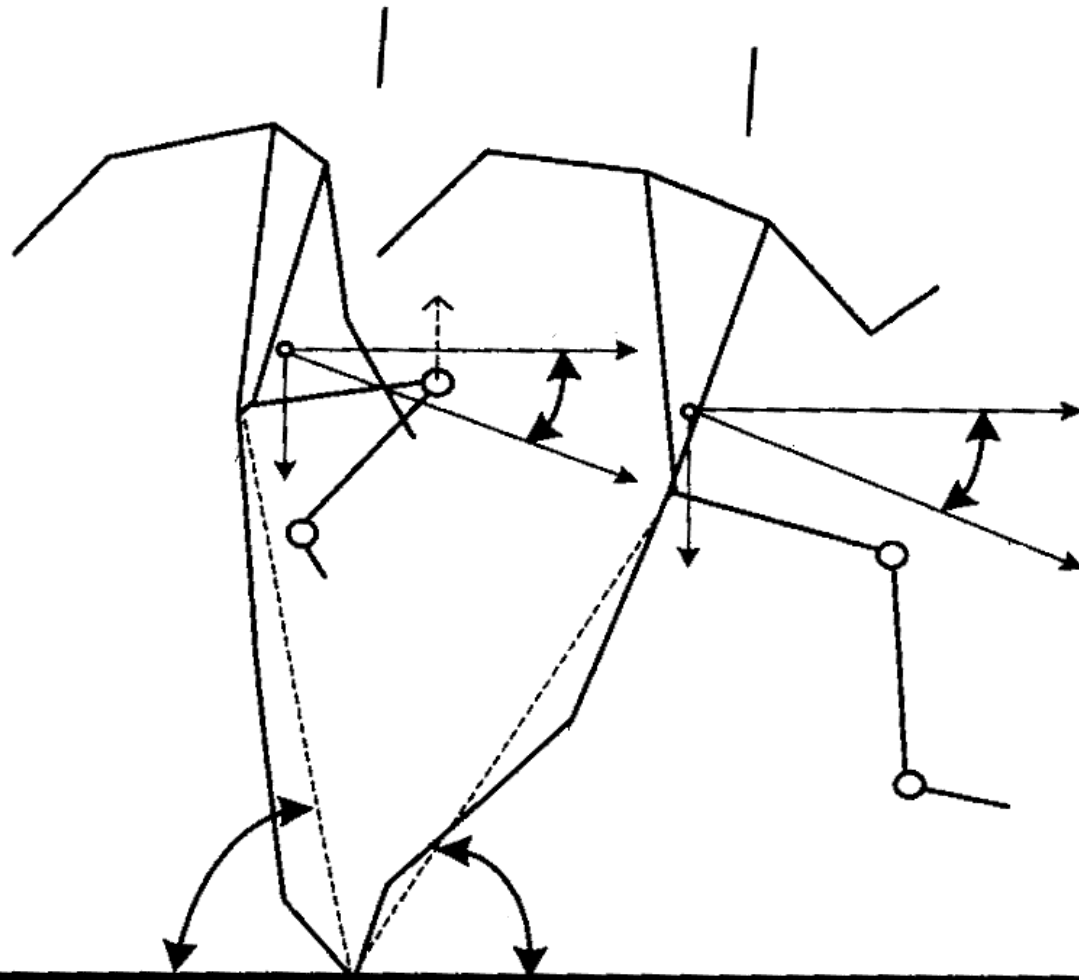
Hurdles' sprint TD position



Rear support

Hurdlers' sprint Push-off figure

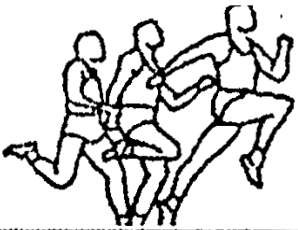
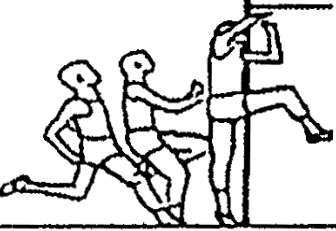
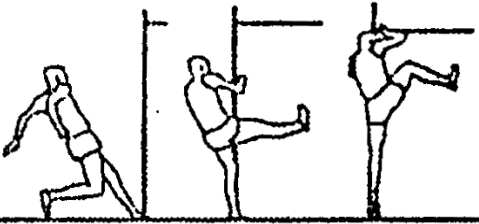
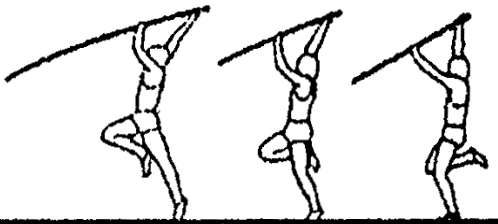




Sample of hurdles' technique parameters

Length of strides (m)					
	third stride	TO distance	TD distance	HS	first stride
Dvořák	2,09	2,25	1,62	3,87	1,65
Šebrle	2,04	2,28	1,86	4,04	1,56
Height of CM (m)					
	TO	maximum	TD		
Dvořák	1,24	1,35	1,26		
Šebrle	1,23	1,36	1,19		
TD and TO angle of hurdle's stride and first stride					
	Hurdle's stride		First stride		
	TD	TO	TD	TO	
Dvořák	65,3	60,1	77,1	69,9	
Šebrle	65	60	80,7	66	

JUMPS

Reference	Discipline	Duration	V	V ₀
Jumps		120 ms	10-11 m/s	10 m/s
		140 ms	7-8 m/s	5.5 m/s
		240 ms	5-8 m/s	5 m/s
		120 ms	8.8-9.7 m/s	-



Front support pole vault (TD)
(Angle of the knee joint)



Pole vault take-off figure
(forward lean of the trunk)



Front support

(trunk backward lean,
angle of knee joint)

Long jump take-off position

(full extension of take-off leg,
swing arm, swing leg)



Front support (TD)

(Trunk backward lean)

Flop take-off figure

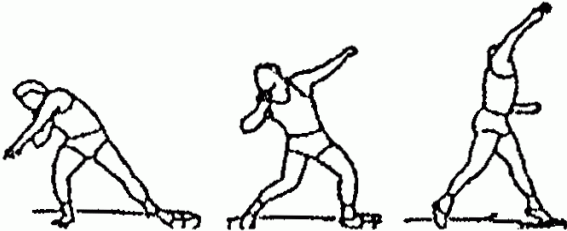

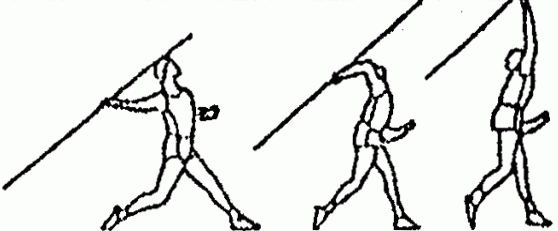
(full extension, axis of the shoulders)



Long jump take-off



Throws

Reference	Discipline	Duration	V	V ₀
Throws		270/<100 ms	3 m/s	14.3 m/s
		250/<100 ms	-	26.5 m/s
		300/<100 ms	6-8 m/s	32 m/s



Left leg TD position



Release position



Left leg TD position



Release position



Left leg TD position



Striking position



Literature

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