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(5)
(18-16) / (50) (Sony) (12)

:
(/ 14.31)
(/ 328) (/ 9.52) (/ 390)

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(Katsikadelli, 2006) (

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(...
(Hunter, 2004)

) 1999) .(

: (2001

(Jenson, 2000)

.2008/7/4 2007/10/30 *

(1998)

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.(Simon, 2001)

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.(Susan,1995)

.(2007)

(Sandor,1997)

.(1996)

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.(1997)

.(Wilson, 2006) (1994)

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(1997)

(2003 1987)

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(1992) "

(2002 2006)

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(1998 1994

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(2.40-1.20)

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(7.2)

(3.4)

(2002) .

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(Coleman, 2006)

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(°180)

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(/ 19.47)

(Elliot, and Wood,

(Tail, 2006)

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(William, 2006)

(11)

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0.75	17.1	()
3.45	187.3	()
2.68	69.80	()

(%35)

(HDJ)

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(3.45 ±187.3)

(0.75 ±17.1)

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(1) (LG) (20)

t-test -1

-2 (Mikasa)

(2.43)

(2)

1.90	9.52	/	
0.35	55.6		
28.12	325.80	/	
6.15	43.41		
9.25	120.79		
7.30	105.9		

(Auto CAD VER14) *

(13.30) *

(1.70)

()

(3)

3.18	14.31	/	
0.18	89.15		
62.20	388.20	/	
2.62	62.44		
8.75	125.52		
11.60	117.21		

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(4)

()					
*3.71	3.18	14.31	1.90	9.52	(/)
*18.02	0.18	89.15	0.35	55.6	()
*8.55	62.20	388.20	28.12	325.80	(/)
*3.41	2.62	62.44	6.10	43.41	()
1.83	8.75	125.52	9.25	120.79	()
2.40	11.60	117.21	7.30	105.9	()

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A Comparative study for some Kinematics Variables in both Tennis and Smash serve in Volleyball

Ahmad A. Okor *

ABSTRACT

This study aimed at Knowing some differences in kinematics variables for both tennis serve and smash serve in volleyball.

The researcher used the descriptive approach; the study sample consisted of the best (5) players from the study community, which was (12) players from Irbid Volleyball Team, whose ages ranged between (16-18) years. They were videotaped by a Sony Digital camera.

The study dealt with the following Kinematics variables: ball speed, angle speed of attacking arm, fly angle, and angel of knee and hip while preparedness.

The study results showed that the best speed for smash serve was (14.31 m/sec), and for the angle speed of attacking arm was (390 degree/sec), while in tennis serve the best ball speed was (9.52 m/sec), and for the angle speed of attacking arm was (328 degree/sec).

The study recommended that it is necessary to pay attention for the technical execution of the attacking arm in tennis serve, and the emphasis on following the attacking arm to the ball in smash serve.

Keywords: Smash Serve, Tennis Serve, and Kinematics Variables.

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