PHYSICAL EDUCATION

INFLUENCE OF e-CONTENT BASED COACHING ON SELECTED FUNDAMENTAL SKILLS IN FIELD HOCKEY

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Abstract

The purpose of the study was to examine the influence of e-content based coaching on selected fundamental skills in Field Hockey. To achieve the purpose of this study 30 male under graduate students from Meenatchi Ramasamy group of institutions, Thathanur, Tamilnadu, India were selected as subjects and their age ranged between 17 and 20 years. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent teaching & coaching with e-content package and Group 'B' undergone teaching & coaching without e-content package. The teaching & coaching with e-content group were shown the content developed electronically by the investigators and the other group was given teaching & coaching only in the field. Both the groups undergone respective schedule for six weeks on alternate days. Teaching & coaching session in the field lasted for 60 minutes and e-content schedule was meted out for 20 minutes. The fundamental skills namely straight hit, wrong foot hit, straight push, wrong foot push, straight flick, wrong foot flick and scoop in Hockey were selected as variables. The subjective rating was done by three qualified coaches on each skill selected in this study. The rating was done on 10 points scale by each coach and average on each skill was taken as individual score. Analysis of covariance was used, where the final means were adjusted for differences in the initial means, and the adjusted means were tested for significance. From the analysis of data it was found that the teaching & coaching combined with e-content package group showed significant improvement on all selected fundamental skills in Field Hockey.

Keywords: Multimedia, Coaching, Field Hockey

Introduction

Field Hockey is a popular sport and it is played in more than 127 countries around the globe. Its official name by which it is usually known is Hockey. Hockey has gone through tremendous changes in the last four decades. Synthetic surface was first introduced in the Olympics at Montreal in 1976. Along with the turf, there were a lot of changes in the general play and execution of basic technique. From the inception of the game the coaching is followed in a traditional manner i.e. field based one. In past, most of the teams never had a full time coach. In most of cases, a person designated as the manager would also act as the coach, today's coach should evolve a coaching system that trains his wards in the perfection and execution of the basic skills, general play, fitness level, and etcetera. The coaching also differs depends upon the coach. In recent times the coaches are eager to use the software.

As we approach the twenty first century and look back over the last two decades, it is apparent that the use of computers in society has grown exponentially. However, computer usage in physical education has tended to lag behind other subjects. Wilkinson (1997) opines that to a lack of vision as to how computers could be used in such a physically active subject and because much of the early physical education software was very basic and often did not capitalize on the computer's capabilities.

The use of multimedia computer assisted instruction as a supplement to traditional teacher-led approach produces achievement effects superior to those obtained with traditional instruction alone Christmann & Badgett (2000) and Schacter & Fagnano (1999). These findings are relevant to students of different ages & abilities and learning in different curricular areas. Jolicoeur & Berger (1986) stated the need for more empirical studies to prove that a software usage does improve learning. Empirical testing of multimedia effectiveness is not done extensively (Zane & Frazer, 1992).

In a study Wilkinson et al. (1999) found that junior high school girls in Teacher-led instruction class and multimedia computer assisted instruction class significantly improved in their knowledge of Volleyball rules and in performance of most skills during the 16-day unit. The purpose of this study was to examine the influence of e-content based coaching on selected fundamental skills in Field Hockey.

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Materials and Methods

To achieve the purpose of this study 30 male under graduate students from Meenatchi Ramasamy group of institutions, Thathanur, Tamilnadu, India were selected as subjects and their age ranged between 17 and 20 years. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' underwent teaching & coaching with e-content package and Group 'B' undergone teaching & coaching without e-content package. The teaching & coaching with e-content group were shown the content developed electronically by the investigators and the other group was given teaching & coaching only in the field. Both the groups undergone respective schedule for six weeks on alternate days. Teaching & coaching session in the field lasted for 60 minutes and e-content schedule was meted out for 20 minutes. The fundamental skills namely straight hit, wrong foot hit, straight push, wrong foot push, straight flick, wrong foot flick and scoop in Hockey were selected as variables. The subjective rating was done by three qualified coaches on each skill selected in this study. The rating was done on 10 points scale by each coach and average on each skill was taken as individual score.

The subjects were selected randomly, but the groups were not equated in relation to the factors to be examined, hence the difference between means of the two groups in the pre-test had to be taken into account during the analysis of the post-test differences between the means. This was achieved by the application of the analysis of covariance, where the final means were adjusted for differences in the initial means, and the adjusted means were tested for significance.

Results and Discussions

The results were presented in the following tables,

Table – I: Descriptive analysis of selected skills of teaching & coaching combined with e-content package group

Sl.No	Skills	Pre Test Mean	SD (±)	Post Test Mean	SD (±)	Adjusted Mean
1	Straight Hit	3.26	1.09	8.13	0.74	8.13
2	Wrong Foot Hit	4.53	0.91	7.86	0.73	7.84
3	Straight Push	4.00	0.92	7.33	1.11	7.38
4	Wrong Foot Push	3.53	1.12	7.66	0.81	7.63
5	Straight Flick	3.53	0.91	7.86	1.12	7.86
6	Wrong Foot Flick	3.46	0.63	7.93	0.70	7.91
7	Scoop	3.26	0.59	8.20	0.56	8.22

The above table documents the pre & post tests means, standard deviations and adjusted mean values of teaching & coaching with e-content package group on selected skills in Field Hockey. The teaching & coaching combined with e-content group pretest mean score reveals that wrong foot hit values was greater, while post test mean score reveals greater values on scoop.

Table – II: Descriptive analysis of selected skills of teaching & coaching without e-content package group

Sl.No	Skills	Pre Test Mean	SD (±)	Post Test Mean	SD (±)	Adjusted Mean
1	Straight Hit	3.20	1.08	3.86	0.74	3.86
2	Wrong Foot Hit	4.33	0.72	4.76	0.69	4.18
3	Straight Push	3.53	1.12	3.60	0.63	3.54
4	Wrong Foot Push	3.26	1.09	3.46	0.91	3.50
5	Straight Flick	3.73	0.98	3.98	0.76	3.91
6	Wrong Foot Flick	3.60	0.63	3.91	1.40	3.88
7	Scoop	3.60	0.73	3.75	0.81	3.72

The above table documents the pre & post tests means, standard deviations and adjusted mean values of teaching & coaching without e-content package group on selected skills in Field Hockey. The teaching & coaching without e-content group pretest mean score reveals that wrong foot hit values was greater, while post test mean score reveals greater values on wrong foot-hit.

Table – III: Computation of analysis of covariance on teaching & coaching with and without e-content package groups on selected skills in field hockey

Sl. No	Skills	Source of Variance	Sum of Squares	df	Mean Square	F
1	Straight Hit	BG	136.54	1	136.54	238.95*
		WG	15.42	27	0.57	
2	Wrong Foot Hit	BG	103.85	1	103.85	211.93*
		WG	13.47	27	0.49	
3	Straight Push	BG	104.83	1	104.83	132.40*
		WG	21.37	27	0.79	
4	Wrong Foot Push	BG	126.12	1	126.12	180.82*
		WG	18.83	27	0.69	
5	Straight Flick	BG	133.89	1	133.89	120.62*
		WG	30.18	27	1.11	
6	Wrong Foot Flick	BG	120.23	1	120.23	96.37*
		WG	33.68	27	1.24	
7	Scoop	BG	162.13	1	162.13	386.02*
		WG	11.45	27	0.42	

* Significant at 0.05 level
*$F_{0.05}(1,27) = 4.21$

In table-III the results of analysis of covariance on straight hit, wrong foot hit, straight push, wrong foot push, straight flick, wrong foot flick and scoop were 238.95, 211.93, 132.40, 180.82, 120.62, 96.37 and 386.02 was greater than the required value 4.21 at 0.05 level of confidence. Since the observed 'F' value was greater then the table 'F' value on all selected variables. Hence there exists significant difference among the groups.

Figure I: Showing the mean values of teaching & coaching combined with e-content package group on selected skills in Field Hockey
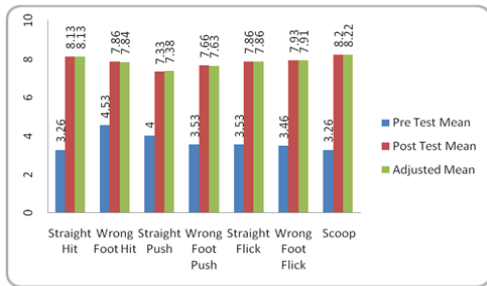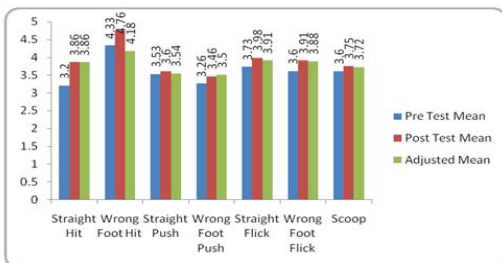

Figure II: Showing the mean values of teaching & coaching without e-content group package on selected skills in Field Hockey

Discussion and Conclusions

Physical Education teachers and coaches are keen in using different innovative methods like showing the accurate game skills, displaying the teaching and coaching instructions, current events, advanced game skills & techniques and tactics. Multimedia software content can be used to learn and to retain the knowledge acquisition of the sports and games skills. Morrison & Reeve, (1988) opines that kill analysis competency can be defined as the teacher's ability to analyze and correct the errors in the skill performance of students. One of the most common ways to do this is the qualitative analysis of movement, which has been defined as observing a movement and deciding how closely the specific features and sequence patterns of the performance adhere to accepted standards for that specific skill.

The present study evolves a new approach in developing the e-content for teaching & coaching the fundamental skills in Field Hockey. Similar effort was carried out by Ivin et al. (2010) in Hockey, Wilkinson et al. (1999) in Volleyball & Elayaraja et al. (2010) in Anatomy.

From the analysis of data, the following conclusions were drawn.

1. It was found that the teaching & coaching combined with e-content package showed significant improvement on all selected fundamental skills in Field Hockey.

2. It was also found that practicing skills combined with e-content package shown significant improvement than the other group.

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