

EFFECT OF VISUAL FEEDBACK ON VOLLEYBALL SKILLS AMONG PHYSICAL EDUCATION STUDENTS

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Abstract

The purpose of the study was to find out the effect of visual feedback on volleyball skills among physical education students. To achieve the purpose of the study, fifteen (n=15) men volleyball players from various department of Manonmaniam Sundaranar university, Tirunelveli, Tamilnadu, India where selected. Their age is ranged between 22 to 25 years. The selected participants were randomly (simple random sample) assigned to one group of fifteen (n=15). The group underwent skill training with visual feedback practice for duration of 6weeks and the number of sessions per week is confined to three days. Service, Passing and Spike were selected as independent variables and were tested with Brumback volleyball service test, Bump to self test and Wall spike test respectively. By using Kinovea software pre and post test were collected. The collected data was statistically analyzed by dependent 't' test and it was tested by 0.05 level of confidence to find the significant differences.

Key words: Research Attitude, Physical Education.

INTRODUCTION

Volleyball is a team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules. It has been a part of the official program of the Summer Olympic Games since 1964. Competitive teams master six basic skills: serve, pass, set, attack, block and dig. Each of these skills comprises a number of specific techniques that have been introduced over the years and are now considered standard practice in high-level volleyball.

Focusing on uses in management theory, **Reinke (2007)** [6] defines feedback generally as "information about the gap between the actual level and the reference level of a system parameter" that is used to "alter the gap in some way." He emphasizes that the information by itself is not feedback unless translated into action.

Nowadays, it is obvious that visual materials have been used in every field and technological devices, especially television and computers, have affected students. As a result of instructional materials that are supported by a variety of sound, image and animations are observed as more lasting, enjoyable and effective ones. Learning is resulted from seeing in 83%, hearing in 11%, smelling in 35%, touching in 1.5% and tasting in 1% (**Christou, 2005**) [2]. Learning is result from seeing 75%, hearing 13%, smelling in 6%, touching in 3% and tasting in 3% (**khan & Franks, 2004**) [3].

Recent evidence shows that visual feedback from the hand contributes to on-line control of reaching throughout the full extent of the movement, even for relatively fast movements (**Ram & McCullagh, 2003**) [5].

Video analysis is a common tool that is used in modern sports to increase coaching performance for individual and team competitions (**Aranha & Goncalves, 2012**) [1]. The National Association for Sport and Physical Education (NASPE 2009) believes that technology can be an effective tool for supplementing instruction when used appropriately. Video instruction used in physical education is to provide students a view of their own performance or feedback as to what they have done (**Luk, Cruz & Lin, 2009**) [4] or to provide instructors/coaches the proper steps to instruct others, not necessarily feedback on their own performance. Video-based coaching is an educational modality that targets intro-operative judgment, technique and teaching (**Hu et al. 2012**) [9]. Coaches and trainers use this method as a corrective method that will help in improving the performance of the athletes since they are only able to recall 30—50 % of key performance factors they had witnessed, even with special training in observation (**Sethu, 2014**) [7] It serves as a feedback for the players which in turn help in motivating them to perform better.

PURPOSE OF THE STUDY

The purpose of the study was to find out the effect of visual feedback on volleyball skills among physical education students.

METHODOLOGY

The purpose of the study was to find out the effect of visual feedback on volleyball skills among physical education students. To achieve the purpose of the study, fifteen (n=15) men volleyball players from various department of Manonmaniam Sundaranar university, Tirunelveli, Tamilnadu, India where selected. Their age is ranged between 22 to 25 years. The selected participants were randomly (simple random sample) assigned to one group of fifteen (n=15). The group underwent skill training with visual feedback practice for duration of 6weeks and the number of sessions per week is confined to three days. Service, Passing and Spike were selected as independent variables and were tested with Brumback volleyball service test, Bump to self test and Wall spike test respectively. By using Kinovea software pre and post test were collected. The collected data was statistically analyzed by dependent 't' test and it was tested by 0.05 level of confidence to find the significant differences.

ANALYSIS OF DATA

PASSING

The pre and post test means, standard deviations and dependent 't' test values on passing skill in volleyball of self modeling group are calculated and present in table I.

TABLE I
MEANS, STANDARD DEVIATION AND DEPENDENT 'T' TEST VALUES ON PASSING SKILL OF SELF MODELING GROUP

Test	Self Modeling		T-Test
	Mean	SD	
Pre-test	25.73	4.57	18.65*
Post-test	30.07	4.36	

*significant at 0.05 level. The table value required at .05 levels with df 14 is 2.14.

The table I shows the dependent 't'-test value of self modeling group pre and post test mean's are 25.73 and 30.07 respectively, the obtained t-test value of 18.65* which are greater than table value of 2.14 with df 14 at 0.05 level of confidence. The result of the study indicates that there was a significant improvement on passing skills due to visual feedback among Physical Education students. The mean value of Visual feedback on Volleyball skills among Physical Education Students were graphically represented in figure I.

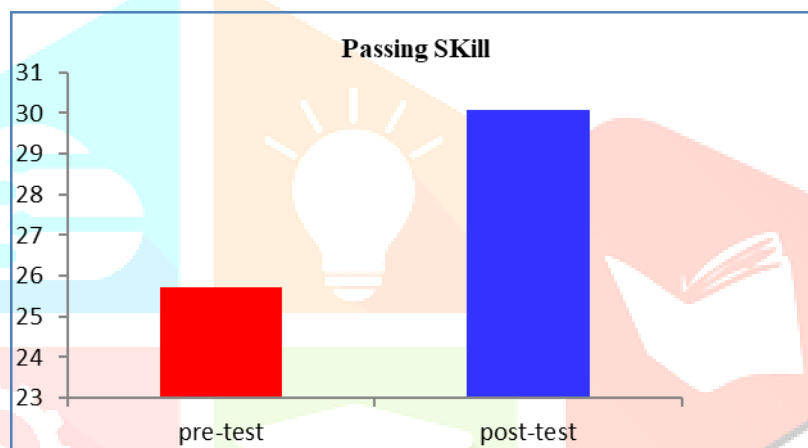


FIGURE I: PRE AND POST TEST MEAN VALUES OF SELF MODELLING GROUP ON PASSING SKILL IN VOLLEYBALL SERVICE

The pre and post test means, standard deviations and dependent 't' test values on serving in volleyball of self modeling group were calculated and present in table II.

TABLE II
MEANS, STANDARD DEVIATION AND DEPENDENT 'T' TEST VALUES ON SERVICE SKILL OF SELF MODELING GROUP

Test	Self Modeling		T-value
	Mean	SD	
Pre-test	17.06	0.46	17.80*
Post-test	26.87	0.62	

*significant at 0.05 level. The table value required at .05 levels with df 14 is 2.14.

The table II shows the dependent 't'-test value of self modeling group pre and post test mean's are 17.06 and 26.87 respectively, the obtained t-test value of 17.80* which are greater than table value of 2.14 with df 14 at 0.05 level of confidence. The result of the study indicates that there was a significant improvement on Service skills due to visual feedback among Physical Education students. The mean value of Visual feedback on Volleyball skills among Physical Education Students were graphically represented in figure II.

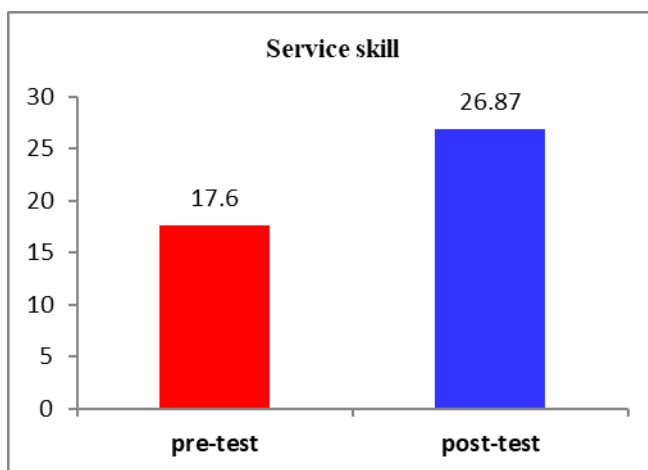


FIGURE II: PRE AND POST TEST MEAN VALUES OF SELF MODELLING GROUP ON SERVICE SKILL IN VOLLEYBALL

SPIKING

The pre and post test means, standard deviations and dependent 't' test values on spiking skill in volleyball of self modeling group are calculated and present in table III.

**TABLE III
MEANS, STANDARD DEVIATION AND DEPENDENT 'T' TEST VALUES ON SPIKING SKILL OF SELF MODELLING GROUP**

Test	Self Modeling		T-value
	Mean	SD	
Pre-test	21.13	0.89	16.43*
Post-test	27.13	0.97	

*significant at 0.05 level. The table value required at .05 levels with df 14 is 2.14.

The table III shows the dependent 't'-test value of self modeling group pre and post test mean's are 21.13 and 27.13 respectively, the obtained t-test value of 16.43* which are greater than table value of 2.14 with df 14 at 0.05 level of confidence. The result of the study indicates that there was a significant improvement on Spiking skills due to visual feedback among Physical Education students. The mean value of Visual feedback on Volleyball skills among Physical Education Students were graphically represented in figure III.

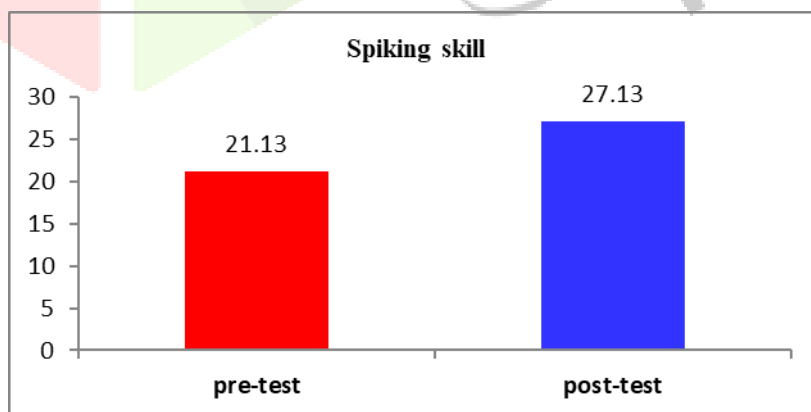


FIGURE III: PRE AND POST TEST MEAN VALUES OF SELF MODELLING GROUP ON SPIKING SKILL IN VOLLEYBALL.

DISCUSSION ON FINDINGS

The result of the study indicate that there was a significant improvement on Passing, Service and Spiking skills in volleyball among Physical Education students due to visual feedback.

Eva Boyer, (2008) [8] analysed the effects of combining expert video modelling with self video feedback as an adjunct to standard coaching techniques were analyzed in this study. Participants in this study were four 7-10 year old competitive gymnasts. During the intervention, each gymnast performed a specific gymnastics skill and then viewed a pre-recorded video

segment showing an expert gymnast performing the same skill. The gymnast then viewed a video replay of her own performance of the skill. Next she saw a side by side slow motion with freeze frame comparison of her performance with that of the expert model. Lastly, in normal time, the gymnast viewed the expert video clip again, followed by her own performance of the skill. The effect of expert video modeling with self video feedback on gymnastics skill performance was evaluated in a multiple baseline across behaviors research design. The results showed that the gymnasts' skills increased in performance following exposure to video feedback.

Jose Manuel Palaoa, Peter Andrew Hastieb, Prudencia Guerrero Cruza and Enrique Ortegaa (2012) [9] assessed the effectiveness of the use of video feedback on student learning in physical education, while also examining the teacher's responses to the innovation. Three classes from one Spanish high school participated in different conditions for learning hurdles in a track and field unit. These conditions compared the use of video feedback (either from the teacher or from peers) with no video. The 'video and teacher feedback' condition provided the most positive overall results, with statistically significant improvements in skill execution, technique, and knowledge learning, as well as the highest level of practice. Nonetheless, while acknowledging the utility of video feedback as an instructional tool, the teacher felt overwhelmed by the demands of the technology on both his time commitments and in terms of his own technology competencies.

CONCLUSION

The following conclusions were drawn from the present study.

1. There was a significant improvement on passing due to the effect of visual feedback on volleyball skills among Physical Education students
2. There was a significant improvement on service due to the effect of visual feedback on volleyball skills among Physical Education students
3. There was a significant improvement on spike due to the effect of visual feedback on volleyball skills among Physical Education students

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