

## Original Article

### Effects of different feedback methods on badminton skills learning

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**Abstract:** This experiment was conducted to measure the effects of three different feedback methods on the learning of two badminton skills among beginners. The study was conducted on 15 student aged 13-15 years boys only with zero training age. They were divided into three equal groups and given instructions for two badminton skills A). Clear and B). Smash. All the three groups were given different instructions Group A. was instructed the correct execution of skills only. Group B. was instructed the errors in execution of skills only. Group C. was instructed the errors in execution of skills and its correct execution also. It was a four week training experiment. Pre test was conducted in the beginning and post test was conducted after four weeks training to compare the improvement of learning of skill in the students. To analyze the test scores a two way ANOVA 2x3 factorial was implied to compare the pre test and post test scores for all three groups and for both the two skills. The result of analyses showed significant difference between pre test and post test scores of all the groups and for both the skills result of first skill: Clear ( $F_{2,62}=4.84, p<0.05$ ) shows significant difference and results of second skill Smash ( $F_{2,62}=9.001, p<0.05$ ) shows significant difference as well. And all three methods improved both the skills significantly.

**Key Words:** Motor learning, Feedback, Smash, Clear

#### Introduction

Badminton is a game for two or four players using lightweight rackets and a shuttlecock, a cork ball fitted with stabilizing feathers. Badminton is the fastest racket sports. It is a game requiring quick sudden movements and fast reaction. Studies on the game of Badminton show that a badminton player needs to have a certain level of muscular strength, power, local muscular endurance, agility, flexibility and athleticism. Another most important thing which badminton players need is the perfection of skills. In this study an important part of motor skill learning process had examined which is feedback. Feedback has great importance in the learning process especially for beginners. In an experiment (Tzetzis and Votsis, 2006) stated that feedback have significant effect in improving the outcome and self confidence in badminton players with 2 to 4 years of training experience.

#### Material and Methods

This study was conducted on a sample of 15 male subjects ranging between 13 to 15 years of age ( $M=13.46$ ) and students of Shivalik Public School Mohali (Punjab) India. Samples were selected under purposive sampling.

#### Subjects (15)

Group – A (5)	Group – B (5)	Group – C (5)
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The sample was divided in three equated groups; all groups were given instructions 2 times a week, for four weeks. There was a warm-up and a cooling down before and after the practice period respectively. At the beginning of every training session a demonstration was performed by the researcher and then the researcher answered the questions about the technique of the two badminton skills. Every practice session was last for approximately 60 minutes. The total duration of the skill feedback (Intrinsic feedback) was 30 minutes and in the last 15 minutes the participants was playing free game.

#### Group – A

It was the first group of 5 male subjects 13-15 years ( $M=13.4$ ). The first type of feedback method was given to this group, in which the *group was instructed the correct execution of skills only*. Feedback was given to this group twice a week (Monday and Thursday) on other days the subjects were done the practice of the skills.

**Group – B**

It was the second group of 5 male subjects 13-15 years (M=13.4). The second type of feedback method was given to this group, in which the *group was instructed the errors in execution of skills only*. Feedback was given to this group twice a week (Tuesday and Friday) on other days the subjects were done the practice of the skills.

**Group – C**

It was the third group of 5 male subjects 13-15 years (M=13.4). The third type of feedback method was given to this group, in which the *group was instructed the errors in execution of skills and its correct execution also*. Feedback was given to this group twice a week (Wednesday and Saturday) on other days the subjects were done the practice of the skills.

*Sunday was rest day for all the three groups.*

**Test explanation**

The **Hicks Badminton test battery (1973)** will be used for the purpose of testing the skill level of the subjects for the present study.

**Results**

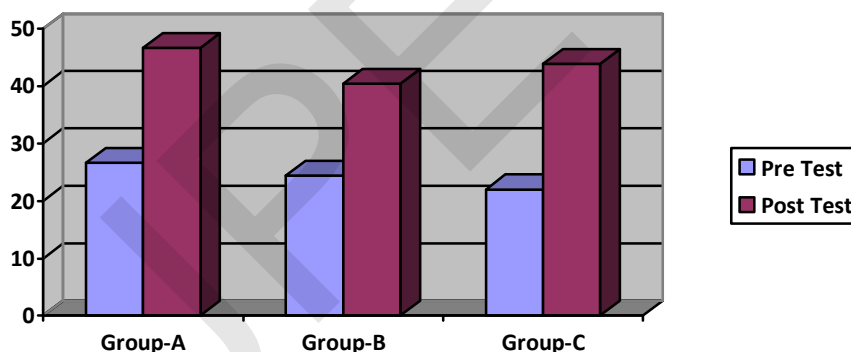
To calculate the results of both the skills and all three groups the pre test scores and post test scores of both the skills of all three groups were compared by applying two way ANOVA 2x3 factorial design.

**Clear Test Results:**

**Table of Means**

	Group-A	Group-B	Group-C
<b>Pre Test</b>	26.6	24.4	22
<b>Post Test</b>	46.6	40.4	43.8

**Clear Test Mean Scores**



**ANOVA SUMMARY**

Source	SS	df	MS	F	P
<b>bg</b>	2933.3667	5	586.67	4.84	0.003351
<b>wg</b>	2907.6	24	121.15		

bg = between groups; wg = within groups (error) (F2.62)

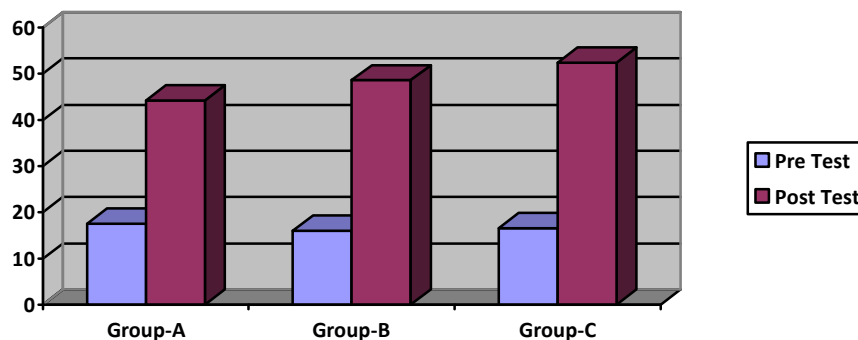
The values given above show significant difference in pre test and post test scores (F2.62=4.84, p<0.05). In all three groups the post test scores had increased significantly as compare to the pre test scores. And all the three methods have significant effect in learning of two skills.

**Smash Test Results:**

**Table of Means**

	Group-A	Group-B	Group-C
<b>Pre Test</b>	17.6	16	16.6
<b>Post Test</b>	44.2	48.6	52.4

**Smash Test Results**



## ANOVA SUMMARY

Source	SS	df	MS	F	P
bg	7695.7667	5	1539.15334	9.001	0.000064
wg	4103.6	24	170.983		

bg = between groups; wg = within groups (error) F2.62

The values given above show significant difference in pre test and post test scores ( $F_{2.62}=4.84$ ,  $p<0.05$ ). In all three groups the post test scores had increased significantly as compare to the pre test scores. And the mean score of pre test and post test scores of group-C had significant difference in respect to other groups.

### Discussion

Many researchers had given this information regarding the importance and value of feedback in the field of sports. Veličković Saša (1997) concluded in his paper which explains the role of feedback in sport training communication. The author concludes that there is no success full communication without feedback. Wulf Gabriele et al. (2002) they examined that how the effectiveness of feedback for the learning of complex motor skills is affected by the focus of attention it induces and The results demonstrate the effectiveness of effect-related, as opposed to movement-related, feedback and also suggest that there is a need to revise current views regarding the role of feedback for motor learning. Tzetzis George et al. (2008) they investigated the effects of three corrective feedback methods, using different combinations of correction, or error cues and positive feedback for learning two badminton skills with different difficulty (forehand clear - low difficulty, backhand clear - high difficulty). Outcome and self-confidence scores were used as dependent variables. Finally a regression analysis depicted that the improvement in performance predicted a proportion of the improvement in self confidence for both the easy and the difficult skill. It was concluded that when young athletes are taught skills of different difficulty, different type of instruction, might be more appropriate in order to improve outcome and self confidence.

This study also showed the importance of feedback in learning of both the skills. In all the three groups the results of post test significantly increased then in pre test for both the skills. And all the three feedback methods have significant effect in learning of two of badminton skills in beginners.

For the skill *clear* all the three methods have improved the post test scores as compare to the pre test scores. The first method in which the subjects were instructed the correct execution of skills only increased the post test mean score to  $M=46.6$  from the pre test score  $M=20.6$ . Subjects of this group learned the skills significantly. In the second group which was instructed the errors in execution of skills only has also increased the post test mean score to  $M=40.4$  from the pre test mean score  $M=24.4$ , but the increase in the score is less as compare to first group. And in the third group which was instructed the errors in execution of skills and its correct execution also, has increased the post test mean scores to  $M=43.8$  from the pre test mean score  $M=22$  and in this group the post test scores have increased maximum as compare to pre test mean score, this method found most useful in learning of the skill Clear.

For the skill *smash* also all the three methods have improved the post test scores as compare to the pre test scores. The first method in which the subjects were instructed the correct execution of skills only, has increased the post test mean score to  $M=44.2$  from the pre test score  $M=17.6$ . Subjects of this group learned the skills significantly. In the second group which was instructed the errors in execution of skills only has also increased the post test mean score to  $M=8.6$  from the pre test mean score  $M=16$ , and the increase in the score is higher as compare to first group. And in the third group which was instructed the errors in execution of skills and its correct execution also, has increased the post test mean scores to  $M=52.4$  from the pre test mean score

M=16.6 and in this group the post test scores have increased maximum as compare to pre test mean score, this method found most useful in learning of the skill Smash.

Finally it was concluded that all the three methods improved the skill level of subjects but the third method in which the subjects were instructed the errors in execution of skills and its correct execution also, has increased the skill level of subjects in both the skills significantly as in other two methods.

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