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## Effect of feedback training and goal setting in learning complex motor skills among physical education students

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### Abstract

This study examined the effects of feedback training and goal setting in learning motor skills among physical education students. 30 male students were randomly assigned to two experimental (one Feedback Training and one Goal Setting) groups and one control group. The training was given for the period of eight weeks 4 days per week, with 30 to 40 minutes in the ground in the morning session. The data for the study was collected in two phases. In the first phase of data collection the Pre tests was taken, and then the training was given to the two groups i.e., Goal Setting Group and Feedback Group for the period of 6-8 weeks. Once the training will be over then comes the second phase of data collection i.e., post test and the data will be collected. The comparison was done by using one way Analysis of Variance. Where the F ratio was found significant scheffe's post hoc test was applied to find out the differences among the sub scores of that variable at different intervals of experiment. The results were examined at 0.05 level of confidence. The paired-sample t test was used to compare the mean scores of pre and post test of the three groups on complex motor skills. Results showed that it may also be concluded that feedback training and goal setting are useful in enhancing learning. Though control group has also shown considerable improvement in learning these skills, which might be due to the regular practice, yet the improvement could have been more by applying feedback training and goal setting technique when learning new skill.

**Keywords:** Feedback training, motor skills, goal setting

### Introduction

Goal setting and performance feedback are two of the most used and most studied performance-enhancing strategies in sport. Both strategies have roots outside of sport with the seminal work for goal setting being conducted in organizational management in work settings and for performance feedback in both organizational management and education. Goal setting and performance feedback have been used extensively in sports settings –long before researchers started attending to their effects, and probably as long ago as individuals wanted to improve their performance. Today goal setting and performance feedback are well known to coaches and researchers alike as effective tools for performance improvement. Goal setting and performance feedback commonly fall under the lay umbrella term of motivation. Motivation is discussed both as a goal of coaches and as a problem with athletes. It is, however, an amorphous term with multiple meanings in both the lay and empirical literature. Brent Rushall, arguably the most influential behavioral sport psychologist in the past 50 years, suggests that athletes are considered motivated if specific behaviors occur at consistently high rates, with seemingly few rewards (Rushall, 1980) <sup>[10]</sup>. The rates of behavior observed are higher than what might be considered “normal” in the setting, and the reinforcers for the behavior may not be obvious to the observers. Sport-specific behaviors can include a variety of behaviors such as attending practices consistently, being punctual to practices and games, completing training tasks and workloads successfully, and providing encouragement to peers, engaging in fair play, and organizing team activities. Goal setting and performance feedback are two of the most effective behavioral interventions that can produce the outcomes Rushall described as “motivation.”

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“A goal is a level of performance proficiency that we wish to attain, usually within a specified time period” (Latham & Locke, 2006, p. 332) [7]. There is a substantial general sports psychology literature examining goal setting (Horn, 2009) [3]. In general, goals have been found to be effective at improving performance outcomes for athletes. However, there are studies that have reported equivocal findings (Locke, 1991; Weinberg, 1994) [6, 12]. Locke (1991) [6] argued that the equivocal findings have been the result of methodological flaws, many of which concern the internal validity of the studies (e.g., choosing goals that were not actually difficult or relevant). More recently, Mellalieu, Hanton, and O’Brien (2006) [9] were critical of goal-setting studies that (a) too often used a limited number of observations of the dependent variables leading to conclusions based on a non-representative sample of observations; (b) combined skills rather than focusing on specific discrete skills, and thus increasing the task complexity that has been shown to be a strong moderator of goal-setting effects (Latham & Locke, 2006) [7]; and (c) too often used dependent variables that were not important variables for athletes and as such there was little commitment from the athletes in achieving the goals.

The purpose of performance feedback is to provide information to athletes that allow them to correct or maintain their performance. Similar to the goal-setting literature, the findings for feedback are inconsistent and do not support often-cited assumptions that (a) more feedback is better (Lee, Keh, & Magill, 1993; Magill, 1994) [5, 8], (b) some feedback is better than no feedback (Lee *et al.*, 1993) [5], or (c) positive feedback is better than corrective feedback (Brophy, 1981; Brophy & Good, 1986; Lee *et al.*, 1993; Magill, 1994) [5, 8]. Among the reasons for these inconsistent results are that many feedback studies were conducted under laboratory conditions with little ecological validity. Also, feedback studies too often have focused on the topography of the feedback (e.g., positive, corrective, negative) or who provided it (e.g., instructor or peer) without assessing the effects of the feedback. Other limitations are that feedback studies have used pre-post measures of student and athlete learning, have not reported effects of the feedback relative to specific trials, and confused feedback with reinforcement (Ward, 1995) [11]. Behavioral studies of performance feedback avoid many of the above limitations.

**Design of the study:** To solve the purpose of the study three groups were formed in the beginning of the study two experimental groups, i.e., experimental group (feedback training), and experimental group (goal setting) and a control group. The students of experimental group (feedback training) were given feedback regarding their performance during the period of training. The short and long term goals were set for the students of experimental group (goal setting). The training was given for the period of eight weeks 4 days per week, with 30 to 40 minutes in the ground in the morning session. No special instruction was given to control group but they were directed to practice these skills regularly without any special instructions.

**Selection of Sample:** The sample selected for the study were 30 Physical Education male students studying in B.P.Ed 1<sup>st</sup> and B.P.Ed 2<sup>nd</sup> Year in the Department of Physical Education, Post Graduate Government College, Sector-11, Chandigarh. Their ages lies between 17-20 years. Random sampling technique was used to select the sample. The subjects were randomly divided into three different groups i.e., experimental

group (feedback) experimental group (goal setting) and control group. Each group carries 10 students in it.

**Selection of the Variables:** The following variables were selected for the present study:

1. Goal setting
2. Feedback
3. Complex motor skills: The complex motor skills used in this study were selected from soccer.
  - Juggling
  - Dribbling
  - Passing for Accuracy

**Selection of the Test Items:** The test items for the study will be taken from Van Rossum Soccer Skill Test constructed by Van Rossum (1968). The test items will be administered twice to all the three groups i.e., prior to the training and after the training.

#### Administration of the Tests Items and Collection of Data:

Prior to the administration of the test items the investigator had meeting with the subjects. The objectives and purpose of the test were made clear to the subjects so that they were made aware of what they were expected to do. The data was collected by using Van Rossum Soccer Skill Test.

The data for the study was collected in two phases. In the first phase of data collection the Pretests was taken, and then the training was given to the two groups i.e., Goal Setting Group and Feedback Group for the period of 6-8 weeks. Once the training will be over then comes the second phase of data collection i.e., posttest and the data will be collected.

**Statistical Techniques:** In order to examine the hypothesis of the study, One Way Analysis of the Variance and where the ‘F’ ratio was found to be significant the Scheffe Post Hoc test was used to see the direction of differences. To see the difference in the mean scores of pretest and posttest paired t test was used.

**Analysis and interpretation of data:** The results of the comparison of the three groups i.e., experimental group (feedback training) experimental group (Goal setting) and control group, are presented. The comparison was done by using one way Analysis of Variance. Where the F ratio was found significant scheffe’s post hoc test was applied to find out the differences among the sub scores of that variable at different intervals of experiment. The results were examined at 0.05 level of confidence. The paired-sample t test was used to compare the mean scores of pre and post test of the three groups on complex motor skills. The results were examined at 0.05 level of confidence.

**Table 1:** Scheffe Test of the three groups on passing

Group	N	Subset for alpha = 0.05	
		1	2
ControlGroup	10	25.6000	
Feedback Group	10	27.9000	27.9000
Goal Setting Group	10		30.9000

From table it can be seen that there is no significant difference in the mean scores of experimental group (feedback training) and experimental group (goal setting). But there is significant difference in the performance of control group and experimental goal setting group. Hence it may be said that experimental group (goal setting) was superior to the control group before the training.

**Table 2:** Scheffe test of the three groups on Dribbling

Group	N	Subset for alpha = 0.05	
		1	2
Control Group	10	21.0000	
Feedback Group	10		22.6000
Goal Setting Group	10		22.9000

From table, it can be seen that the mean scores of control group differ significantly from experimental group (goal setting) and experimental group (feedback training) in dribbling. Hence it can be said that both the experimental groups have significantly higher level of dribbling ability than the control group. But no significant difference has been seen between the experimental group (Goal Setting) and experimental group (feedback training).

**Table 3:** Scheffe's test of the three groups on Juggling

Group	N	Subset for alpha = 0.05	
		1	2
Control Group	10	11.6000	
Feedback Group	10		17.2000
Goal Setting Group	10		20.5000

From table, it can be seen that the mean scores of control group differ significantly from experimental group (goal setting) and experimental group (feedback training) in dribbling. Hence it can be said that both the experimental groups have significantly higher level of juggling ability than the control group. But no significant difference has been seen between the experimental group (Goal Setting) and experimental group (feedback training).

**Discussions of the findings:** After data analysis we can infer that all the three groups, i.e., experimental group (feedback training), experimental group (goal setting) and control group have comparable passing and dribbling skills where as experimental group (goal setting) is significantly higher than the rest of the two groups before the start of the training.

From results we can conclude that after the training of eight weeks both the experimental groups display better dribbling and juggling skills than the control group. Whereas, passing skills of all the three groups are similar even after the training.

From results reveal that there is a significant difference in the mean scores of the pretest and posttest on the three skills, i.e., passing, dribbling and juggling of all the three groups, i.e., experimental group (feedback training), experimental group (goal setting) and control group.

Though control group has also shown considerable improvement in learning of complex motor skills, this improvement is might be due to the regular practice for eight weeks, yet the improvement in learning of new skills, could have been more by applying feedback training and goal setting technique. It is revealed in the present study that there is a considerable effect of feedback training and goal setting in learning all the dribbling and juggling skill of soccer more than the control group by the students of Physical education.

### Conclusion

Within the limitation and delimitation of the present study and based on results the following conclusion are drawn:

1. It may therefore be concluded that there is considerable effect of feedback training in learning passing skill of soccer by the students of Physical education.
2. It may therefore be concluded that there is considerable effect of feedback training in learning dribbling skill of

soccer by the students of Physical education.

3. It may therefore be concluded that there is considerable effect of feedback training in learning juggling skill of soccer by the students of Physical education.
4. It may therefore be concluded that there is considerable effect of goal setting in learning passing skill of soccer by the students of Physical education.
5. It may therefore be concluded that there is considerable effect of goal setting in learning dribbling skill of soccer by the students of Physical education.
6. It may therefore be concluded that there is considerable effect of goal setting in learning juggling skill of soccer by the students of Physical education.
7. Further it may also be concluded that feedback training and goal setting are useful in enhancing learning. Though control group has also shown considerable improvement in learning these skills, which might be due to the regular practice, yet the improvement could have been more by applying feedback training and goal setting technique when learning new skill.

### References

1. Brophy J. Teacher praise: A functional Analysis. Review of Educational Research 1981;51(1):5-32.
2. Brophy J, Good T. Teacher behavior and student achievement. In M. C. Wittrock (Ed.), Handbook of research on teaching (3rd ed.). New York: Macmillan. 1986, 328-374.
3. Horn TS. Advances in sport psychology. Champaign, IL: Human Kinetics 2009.
4. Latham GP, Locke EA. New developments in and directions for goal-setting research. European Psychologist 2007;12:290-300.
5. Lee AM, Keh NC, Magill RA. Instructional effects of teacher feedback in physical education. Journal of Teaching in Physical Education 1993;12:228-243.
6. Locke EA. Problems with goal setting research in sports and their solution. Journal of Sport and Exercise Psychology 1991;13:311-316.
7. Locke EA, Latham GP. New directions in goal-setting theory. Current Directions in Psychological Science 2006;15:265-268.
8. Magill RA. The influence of augmented feedback on skill learning depends of characteristics of the skill and the learner. Quest 1994;46:314-327.
9. Mellalieu S, Hanton S, O'Brien M. The effects of goal setting on rugby performance. Journal of Applied Behavior Analysis 2006;39:257-261.
10. Rushall BS. Psychological factors in sports performance. In F. S. Pyke (Ed.), Towards better coaching. The art and science of coaching Canberra ACT: Australian Government Printing Service 1980,177-214.
11. Ward P. A response to "The negative effects of positive reinforcement in teaching children with developmental delays". Exceptional Children 1995;61:489-492.
12. Weinberg RS. Goal setting and performance in sport and exercise settings: A synthesis and a critique. Medicine and Science in Sports and Exercise 1994;26:469-477.