



# The Study of Bilateral Transfer in Football Dribble Skill from The Non-Dominant on Dominant Hand and Conversely

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## Introduction

Statement of the problem (description of dimensions, limits of the problem, accurate introduction of the problem, expression of unknown and ambiguous aspects and variables related to research approaches, purpose of research): Because skills are a major part of human life, scientists and educators have tried for centuries to identify the determinants that affect performance [1]. The acquired knowledge has provided many applications in various aspects of human life, including the improvement and development of sports performances and physical activities. Important practical points in physical education, which include efficient methods in teaching skills and transferring them to different situations and situations of life, have attracted the main attention. Also, these practical methods can be used to improve sports performances at a high level. Obviously, what most educators pursue in different ways during skills training is learning and practicing them. One of the main goals in Motor learning is the recognition of variables that play a role in maximizing learning [2].

Over time, much progress has been made in acquiring motor skills. Issues such as training style, type of training and the role that these factors play in learning motor skills have received a lot of attention (Hamayattalam and colleagues 2008). Since the rapid progress of beginners in learning sports skills and the superiority of skilled people in performing sports techniques, depends on the use of different body parts [3], to be more successful in different sports, you need to use two the symmetrical organ trained in the

same way, but this is not possible due to factors such as limited training time. Therefore, the principle of two-way transfer can be used in the field of sports skills. Due to the widespread importance of learning transfer, the phenomenon of two-way transfer should be considered as part of the foundation of the concept of motor learning. When the transfer of learning is related to the learning of a task but related to the other organ, it is called reciprocal transfer [4]. Bilateral transfer is usually defined as gaining or losing in the performance of a task with an organ that is normally practiced or experienced. Assignment is not used [5].

The ability to perform a two-pronged skill first introduced by Swift (1903) in many competitive sports It is of special importance [6]; translated by Vaez Mousavi and Shojaei, 2008). The lateral transfer phenomenon is based on the theory of motion control. According to schema theory, actions are controlled by the mechanism of organized movement program (GMP) and can be produced by different muscles on both sides of the body [7]. Another mechanism for muscle selection is schema evocation, which can be enhanced by exercise variability [8]. According to the prediction of schema theory, increasing variability within a response class promotes skill acquisition [6]. Also, the variety of movements and background experiences is an important part of the training conditions, this feature is the ability of the individual to perform Successfully increases skills and adaptability to conditions not previously encountered [9].

Mutual development of skills is an important aspect of training programs, although training experiences show that rarely both members are used with the same emphasis. There may be many reasons for such situations. Mostly Time for learning motor skills is limited by the amount of time available. In addition, the learner has a strong sense of success in skill. The combination of reasons suggests that a beginner is faced with membership in the face of a choice. Makes you feel more comfortable. This will automatically cause the other member to neglect unless the person is in Be in a position where the lack of mutual efficiency limits his ability [10]. Benefits of two-way transfer with ascent Age increases due to an increase in individual abilities to solve motor problems, the growth of the neuromuscular system, an increase in the number and variety of cognitive experiences [11].

The importance of two-way transfer will increase in sports where two symmetrical limbs are used frequently in many movements (dribble and shot in football, dribble and shot in basketball, dribble and shoot in handball, etc.). Therefore, coaches who better understand the effective learning processes, no doubt in training skills for their athletes, exercise training program Bilaterals are also included. Skills such as shooting and dribbling are more important in many ball-related sports skills. It has, because the variety of movements in sports competitions reduces the opportunity and predictive power of the team and the opposing players, and ultimately leads to the superiority of the player and the team. Considering the explanations about the effectiveness of various training programs and bilateral training program as well as the importance of using both feet when performing football dribble, the researcher in this study seeks to answer the following questions: Is there a two-way transfer of the face? Accept? Is there a two-way transfer from the superior foot to the non-superior foot or vice versa?

## Necessity of Research

From the beginning to the end of their life, human beings are constantly connected with different forms of learning and are constantly learning, without which life in any society is impossible. Imagining a world without learning, especially learning motor skills, is strange and unbelievable [4]. Motor learning introduces the basic processes related to learning human movements and fills the gap between different theories and hypotheses through various research. The skillful performance of various sports movements has led to the formation of many questions in the minds of researchers and those interested in the science of motor learning, all of which seek to find a way to better learn the skills and better performance of athletes [1].

One of the training methods that has been considered by psychologists and motor learning specialists in recent years is bilateral or two-way training. This training method has been confirmed by several theories but has been reported to be unattainable by many studies in this field. Therefore, the first necessity for conducting the present research is to address the challenge that arises between related studies and theories. As previously explained, football dribbling is one of the skills that is used frequently during training and competition and given that this

skill is done by using both feet at different times. It is necessary to take care of the further development of this skill. Therefore, the question must be answered whether there is a two-way transfer? And if there is a two-way transfer, from which member is this transfer? The results of this study can help teachers and educators in how to teach sports skills and students in learning. On the other hand, these results can. To be used in therapeutic and movement therapy aspects.

## Relevant Records (Brief Statement of the History of Research on the Subject and the Results Obtained from Existing Scientific Theories on the Subject of Research):

In their study, [12] examined the two-way transfer of skills in the right hand and left hand. In this study, the transfer of speed and accuracy skills from superior (preferential) to non-superior (non-preferential) and vice versa was analyzed using the drawing test in Mirror 5. The results showed no difference between the two-way transfer of right and left hand. But the two-way transfer from non-preferred hand to preferred hand is larger compared to the opposite case (superior hand to non-superior hand). Was. This transition was also observed at higher speeds than accuracy.

[13] in a study examined the two-way transfer of learning in right-handed and left-handed students. In this study, like [12], the drawing skill test in the mirror was used. The results showed that there was a difference in different conditions between the right- and left-hand groups. In general, the transfer from superior to non-superior was greater. But no difference was observed between the right- and left-hand groups in terms of transmission rate. [14] in a study entitled, Investigating the two-way transfer of badminton short service skills from superior to non-superior and vice versa. In this study, the independent variable of exercises for learning skills and the dependent variable was the amount of manual learning that did not participate in the exercises. The results of this study showed that two-way transfer from both members to each other is possible.

Farah Banoo Ghaderi (2000) also studied the two-way transfer of dribble basketball skills in female students. The results of this study also showed that, in the pre-test phase, no significant difference was observed between the two experimental groups, but in the post-test phase. Participants in the experimental group performed longer throws, and the superior hand was more useful in two-way transmission than the non-superior hand.

## Hypotheses or questions

1. Training with the superior foot has a significant effect on increasing the performance of the non-superior foot in football dribble skills in the acquisition stage.
2. Exercising with the superior foot has a significant effect on increasing the performance of the non-superior foot in football dribble skills in the memorial stage.
3. Exercising with the superior foot has a significant effect on increasing the performance of the non-superior foot in football dribble skills in the transfer stage.

4. Training with non-superior feet is significantly effective on increasing the performance of superior foot in football dribble skills in the acquisition stage.
5. Training with non-superior feet has a significant effect on increasing the performance of superior feet in football dribble skills in the memorial stage.
6. Training with non-superior feet is significantly effective on increasing the performance of superior foot in football dribble skills in the transfer stage.
7. There is a significant difference between the rate of transfer of football dribble skills from superior to non-superior and vice versa.

### Research goals (including scientific, practical goals and special needs of research)

#### General purpose:

The general purpose of this study is to investigate the two-way transfer of football dribble skills from superior to non-superior foot and vice versa in male students.

#### Specific goals (details)

1. Determining the effectiveness of training on learning dribble football skills
2. Determining the rate of transfer of football dribble skills from the superior foot to the non-superior hand in the acquisition stage
3. Determining the rate of transfer of football dribble skills from the superior foot to the non-superior foot in the memorial stage
4. Determining the transfer rate of football dribble skills from the superior foot to the non-superior foot in the transfer stage
5. Determining the rate of transfer of football dribble skills from non-superior foot to superior foot in the acquisition stage
6. Determining the rate of transfer of football dribble skills from non-superior foot to superior foot in the memorial stage
7. Determining the transfer rate of football dribble skills from non-superior foot to superior foot in the transfer stage

### Work method

#### Type of research method:

The research method is quasi-experimental and has a pre-test, post-test design with a control group. Project information is collected from the stages of pre-test, acquisition, retention and transfer.

#### Information collection method (field, library, etc.):

After selecting the statistical sample of the research in order to ensure the consent of individuals to participate in this research project, satisfaction A written letter will be provided to these

newcomers and will be collected upon completion. The training stages will include football dribbling training. The training course will last for 10 sessions and each session will include 10 football dribble training sessions according to the group training program. In each training session of the superior leg group (a), they will perform 10 dribbles in the form of 5 blocks of 2 attempts with a 5-minute rest interval between the blocks with the superior leg. The non-superior foot group (b), like the first group, dribbles with a soccer ball in 5 blocks of 2 attempts, and the control group (c) during this period does not have any training related to dribbling performance. Football will not do. In all sessions, participants' scores will be recorded by the researcher.

#### Data collection tools (questionnaire, interview, test observation, receipt, table, sampling, laboratory equipment and information banks and computer and satellite networks, etc.):

1. Questionnaire of personal and sports characteristics of the subjects: which includes name, surname, date of birth, height, weight, health status, determination of sports history and participation in official competitions.
2. Score sheet for each training session: These sheets, which are set based on the performance of each group and are used to record the desired efforts for each subject in each session, and during the performance, the score for each effort It is recorded in front of it.
3. Standard soccer ball
4. Moore-Christine dribble and pass test: In this test, the person stands at a distance of 9 meters from the first cone, and then with the start command, it runs towards the 6 cones, which is 180 cm apart, and passes through them in a zigzag manner and quickly and returns to the first cone. Using the timer, the start time of the movement from the first cone to the last will be recorded. In the transfer test, individuals will perform the skill of dribbling by increasing one cone (the distance between the cones has reached 155 cm) in two blocks (As in the study of [15-20]).

#### Statistical population and method of data analysis:

The research sample consists of 45 male students with an age range of 20-26 years without any experience in the field of specialized dribbles who are selected by simple random sampling. Participants will be randomly assigned to the following 3 groups: (a) upper leg training procedure, (b) non-superior leg training group, and (c) control group. In order to analyze the information collected from the mean and standard deviation, it will be used as a descriptive statistic for ANOVA to describe the subjects and the data obtained from the research., Retention and transfer, and one-way analysis of variance with repeated measures on the time factor will be used to compare groups in the acquisition stage. At the level of meaning  $P < 0.05$  and will be done using SPSS software version 18.

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## Conflict of Interest

No conflict of interest.

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