

# The Application of Movement Skill Transfer Principle in Physical Education

Xiaohua Ma

School of Physical Education, Taishan University, Taian 271000, china

email: mxh8682067@163.com

**Keywords:** Physical Education; Sports Skills; Transfer Principle; Application

**Abstract:** All kinds of sports skills in physical education do not exist and develop in isolation, but restrict and promote each other. The reasonable use of the transfer of sports skills and the mastery of rules can promote the selection of teaching content and teaching materials and improve the quality of physical education. This paper adopts methods such as literature method and logical analysis method to analyze the influence of sports skill transfer principle on physical education teaching, improve the positive transfer strategy among skills, and avoid or reduce the negative transfer response, so as to provide a basis for improving the quality and efficiency of physical education.

## Introduction

The transfer of motor skills refers to the transfer of some motor skills that have been used to some new motor skills that have not been mastered, which has a positive impact on the learning of new motor skills and helps to improve the composition of new motor skills. In physical education, the transfer of sports skills greatly affects the speed and quality of sports skills learning.

With the continuous improvement of the technical level of competitive sports in China, it presents the trend of high competitiveness, high difficulty and high artistic value. This trend puts forward higher requirements for physical education. The transfer of sports skills helps students to learn physical education by analogy and improves teachers' teaching level, It is one of the main tasks of physical education, and to guide students to master the accurate motor skills and constantly improve the motor technology, and how to improve the main points, improve the quality of teaching and the efficiency and quality of training in useful time, which is worth studying and exploring. The positive and negative transfer of motor skills affects the teaching quality. The teacher plays a guiding role in teaching, appropriately using the transfer rules to organize teaching, in-depth understanding and research the content of physical education teaching, master the transfer rules of various movement techniques, skills, reasonable arrangement of training, to prevent students from injury.

Sports skills are widely used in physical education. For example, students majoring in martial arts have good flexibility. When they learn a gymnastic movement, they will feel that it is very simple and easy to master. But if your body language isn't in sync, you may struggle with your technique. Motor skill is a kind of transfer, which exists in every project learning. [1]

## Basic Principles of Motor Skill Transfer

**Concept of Skill Transfer.** The transfer of motor skills must meet four conditions. First, establish the target of action; Second, assist movement, independent movement; Three, physical and mental movement; Four, the day after tomorrow. In other words, motor skill is the movement of the body

or the limbs of the body, according to certain technical requirements, with the minimum amount of time and energy, and through practice to complete the movement. Migration refers to: mastering knowledge, skills, skills, learning new knowledge, the impact of the formation of new skills. The transfer of motor skills refers to the transfer of some motor skills that have been used to some new motor skills that have not been mastered, which has a positive impact on the learning of new motor skills and helps to improve the composition of new motor skills.

**Types of Skill Transfer.** Skills transfer can be divided into three types: positive transfer: the ability of newly formed sports skills can strengthen and consolidate the previous movements, making it easier to understand and master a new skill. For example, middle school students in gymnastics master the handstand skill, and it is easy to master the shoulder stand technique on parallel bars in the teaching process. Negative transfer: existing skills destroy and interfere with learning new skills, such as learning the forward flexion of a vaulting horse and then learning the backward flexion. The forward flexion must be followed by the forward flexion to the chest and then the body is extended. The reverse is true for the backward flexion. Zero transfer: the newly formed motor skill has no interference or damage to the original and subsequent skills. The transfer ability is zero. In sports, if the relationship between a certain sports technique is horizontal, the horizontal transfer of the same sport is horizontal transfer; If the relationship between motion technologies is vertical, then the transition between the two projects is vertical.

Taking gymnastics teaching as an example, introduces the principle of movement skill transfer. The shoulder-elbow pose starts with a right Angle brace, rolling backwards, lifting legs and turning hips. When the legs are higher than the head, extend the hips upward and straighten the body. At the same time, push both sides of the waist and back with your hands. With the movement of the transfer is by one shoulder back roll into a knee on the balance.

Shoulder-elbow stands are learned before you roll over the back of one shoulder into a one-knee knee balance. Both have backward rolling, leg lifting, and buttock turning movements, so they move forward, but the hips extend in the opposite direction. The negative transfer is to learn to roll after one shoulder into one knee when balancing. Due to too large hip span, the radius is too large to turn over. Under the action of gravity, the body returns to the original path. Some students are very familiar with the skills of shoulder-elbow handstand. When they learn this movement, they will do shoulder-elbow handstand, extend hip is not in place, and reflexively push both sides of waist and back with both hands to make redundant movements. So in the teaching arrangement the teacher generally first studies the shoulder elbow handstand, lets the student grasp its movement key point, after the study single shoulder rolls into one knee to kneel down to support when with the shoulder elbow handstand is the auxiliary, does the auxiliary exercise. The two are related and mutually reinforcing, which requires teachers to explain to students carefully, so that students can master the key skills faster.

In the process of physical education, the imagination of the principle of transfer of motor skills is correct and reasonable, which can not only deepen the established action stereotypes, but also help students to speed up the efficiency to complete new movements.

### **Application of the Principle of Sports Skill Transfer in Physical Education**

**Teaching Materials should be Arranged According to the Principle of Skill Transfer.** The content of the textbook should be arranged according to the principle of skill transfer, and there should be an order when learning new skills, so as to get less result with less effort. For example, in gymnastics teaching, there is an internal connection between gymnastics skills. When arranging teaching content, pay attention to teaching according to the transfer order of skills, so that students

can easily accept it in their hearts. Learning new material according to the familiar skills and internal connections will not make students resist. Teachers should emphasize the technical elements before and after teaching materials, arrange teaching and training reasonably, and promote the key of skill transfer. But also pays attention to the student's individual difference, causes the student to grow healthily. The association of gymnastic skills determines that when learning skills, it is necessary to place as reasonable as possible the technical movements without transfer, so as to prevent or reduce the negative transfer.

Parallel bars activity, it has a high exercise value, often exercise parallel bars exercise, can effectively grow upper limbs, trunk, shoulder strap muscle and abdominal and back muscle strength, and coordination ability and balance ability are all positive promotion. Through parallel bars practice, students can cultivate their courage, perseverance, determination and courage to overcome difficulties, study hard, and achieve good fitness results. The "hanging arm brace flexing up" in parallel bars is transferred from the "right Angle suspension swing flexing up" technology in horizontal bars. In the study of flexion and extension of hanging arm brace, more auxiliary actions of flexion and extension should be done. When the single pole is close to the poles in flexion and extension, it should quickly lift the leg and hip joint flexion, so that the legs are close to the bar to form a flexion suspension, and then rapidly expand the top bar of the front leg hip joint. Transfer of the technique of buckling in horizontal bars.

Language is a basic method of physical education and training, and has a great influence on the transfer of motor skills. By reminding teachers and classmates, students will subconsciously do some activities and give warnings to prevent them from doing useless work. Language can help students understand technology clearly, guide and give play to students' thinking, let students understand this skill from different angles, and master the key points of technology better and faster.

Language has an intuitive and vivid appeal. For example, in the study of forehand somersault, teachers use language signals to send out "push hand" and "shoulder", so that students can establish "push hand" and "shoulder" action signal patterns in their brains. In the vaulting horse, the teacher said in next to "jump" "driver" "empty" "exhibition" shock "chest" action signal mode, learning to shoulder stand in the parallel bars, the teacher beside say "shoulder" "tall" "stretch hip" and leg "action" signal model, so as to establish a conditioned reflex, promote the completion of the key sports skill, so language stimulation can guide the movement.

**Review Time is a Guarantee to Facilitate Skill Transfer.** In physical education teaching, arrange review time reasonably according to the actual situation, in order to consolidate and improve the quality of teaching, only reasonable arrangement of review time will not forget the content of learning. In teaching and training, teachers should be strict with students, strengthen students' self-restraint ability, improve the transfer of skills, master the previously unknown movements in the review, and recharge their batteries.

Sports can give full play to their imagination. Students can freely combine actions and spread their thinking in sports activities. Mature movements require more conscious control, and the more complex the technique, the more difficult the movement, and the faster the skill disappears. Therefore, the formation of motor skills can increase the difficulty of the same technical elements.

Auxiliary exercises can promote the formation of basic movements. Auxiliary exercises are carried out before learning new movements, with the purpose of mastering new skills as soon as possible, improving physical quality and producing technical transfer as far as possible. Quality exercises and auxiliary exercises are necessarily related to the movements to be learned. Proper arrangement of auxiliary exercises can effectively solve part of the movement, which is conducive to the formation and development of new techniques. Therefore, in order to achieve the emergence

of differentiation interference technology, it is necessary to select and arrange the auxiliary exercises reasonably. [2]

### **Factors Affecting the Transfer of Sports Skills in Physical Education**

**Mastery of Basic Theoretical Knowledge.** Every student must master the basic theoretical knowledge. Only by mastering the basic knowledge theory, can we better and more comprehensively understand the charm of technology itself. In order to better establish the movement model, improve the movement efficiency, save the time needed to complete the skill. Mastered the basic knowledge theory, to accelerate the mastery and understanding of motor skills, and then applied to the transfer of skills, shorten the time when learning new skills.

**Master Basic Skills.** Complex skill movements are composed of simple basic movements, so the mastery of basic skills is the prerequisite for mastering complex movements, and also the basis for the transfer to complex movements. In physical education, the content that students learn at the beginning is relatively simple single technical movement, rather than the whole movement. Therefore, the focus of physical education is to master basic skills.

**Teacher Guidance.** Ji liu pointed out in his physical education psychology textbooks that teachers' conscious guidance is conducive to the occurrence of positive transfer. Teachers will consciously guide students to find the common ground between different knowledge, inspire students to summarize, guide students to monitor their own learning or teach students how to learn, all of which will have a good impact on students' learning and transfer. [3]

### **The Principle of Skill Transfer in Physical Education Should be Paid Attention to**

**From Easy to Difficult Principle.** In physical education teaching, we should follow the principle from easy to difficult. Basic movements are the foundation of complex movements, and their proficiency directly affects the mastery of complex movements, as well as the transfer from simple movements to complex movements. Therefore, in the teaching should be easy to difficult, step by step, master the basic knowledge, basic skills.

**Appropriate Amount of Exercise.** The amount of exercise has a direct impact on the mastery of sports skills. Too much exercise leads to fatigue, which is not conducive to the learning and mastery of sports skills, nor is it conducive to the transfer of skills. The amount of exercise is small, can not achieve the effect of physical exercise, motor skills learning can not meet the requirements, is not conducive to mastering. Therefore, appropriate amount of exercise can not only master motor skills, but also facilitate the transfer of skills. [4]

**Simulation Training.** Baidu baike, simulation training is also known as simulation simulation, is generally in the military to carry out modeling, and then use simulation technology to carry out simulation of war situation, strategy, strategy. This approach starts from a system theory point of view and utilizes many other modeling methods, such as mathematical modeling. Simulation training can play a useful role in the transfer, because in the actual training may encounter various difficulties and can not be carried out, so we can use the simulation environment to achieve the training effect, to achieve the actual training effect, conducive to the transfer of motor skills.

**Teaching Innovation.** In physical education, physical education teachers and students should make full use of the rules of transfer, and give play to the transfer of skills creatively. Traditional physical education focuses on the learning and mastering of basic knowledge and basic skills, but limits students' initiative of independent learning. The new PE teaching requires that PE teachers

should take students as the main body of study in PE teaching, master basic knowledge and skills, and creatively learn skills on this basis, which is conducive to the transfer of skills. [5]

## **Summary**

The transfer of sports skills is common in physical education. On the one hand, I should make full use of the rules of the transfer, so that students can master sports skills quickly and well. On the other hand, we should realize that the direct negative transfer of motor skills has a blocking effect on the mastery of skills. Physical fitness, some basic skills cannot be transferred. In physical education, physical education teachers can make good use of the double-edged sword of transfer only by studying the rules of transfer of skills in depth.

## **References**

- [1] GG. Hou, X Zhao. Journal of chengdu university (natural science edition), Vol.24(2005)No4 ,p36. (In Chinese)
- [2] ZM. Liu. Journal of huzhou normal university, Vol.54(2003)No6 ,p38. (In Chinese)
- [3] X Hu. Bulletin of sports science and technology literature, Vol.38(2007)No7,p68. (In Chinese)
- [4] K Dai, HN Ding. Journal of hubei radio and television university, Vol.25(2008)No9,p112. (In Chinese)
- [5] XH. Huang. Hubei sports science and technology, Vol.35(2014)No5,p136. (In Chinese)