

# A Comprehensive Study of Synchronized Rope Skipping in School Physical Education

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[**Abstract**] As a new sport that consumes less time and energy, and integrates fitness, entertainment, viewing, and competition, synchronized rope skipping plays an important role in the enjoyment of body and mind, the cultivation of interest in learning, and the promotion of healthy growth. In recent years, due to the prevalence of electronic products, students are occupied by mobile phones most of the time, and lack of exercise has become a common phenomenon, which has led to a serious decline in the physical fitness of young people in China. Therefore, this study aims to explore the current research on rope skipping in school physical education. It's a summary of the status quo to provide statistics for the development of synchronized rope skipping.

[**Key words**] synchronized rope skipping; school physical education; review research

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## 1 Introduction

In 2009, the monitoring data of national physical fitness showed that the athletic ability of the youth in China continued to decline. The National Physical Exercise Standard Regulations and the National Fitness Program both pointed out that improving the physical fitness of students should be one of the basic goals of school education. Schools at all levels actively carry out a variety of characteristic sports courses. "Rope skipping" is a characteristic project, which has a good development space and is liked by students. Therefore, this sport should be vigorously carried out in teaching.

At present, in the school sports project, "swimming rope skipping" is a characteristic project, which has been widely carried out. As it is easy to learn and understand, there are many patterns. Besides, it features a high degree of appreciation and poses a high challenge to the willpower of participants. Therefore, in school sports, we should look for sports that can stimulate young people's interest, control intensity, and offer a certain degree of appreciation and participation.

## 2 Definition of related concepts

### 2.1 Patterns of rope skipping

Rope skipping is a wonderful sport, which includes rope gymnastics, rope dancing, professional sports, fun performances, etc. .

### 2.2 Types of rope skipping

According to the length, the type of rope skipping can be divided into: short rope, medium rope, and long rope. According to the number of people, the type of rope skipping can be divided into: single jump, pair jump, and multi-jump. According to the number of ropes, the type of rope skipping can be divided into: single rope, pair rope, and multi-rope.

### 2.3 Features of rope skipping

(1) A variety of patterns ranging from back and single shake to cross and multiple shakes. The combination is colorful and diverse, and the viewer will have a sense of visual impact and shock the soul at the same time.

(2) Fitness and entertainment: Rope skipping can exercise nerves and muscles, and develop all aspects of the body. By skipping rope regularly, muscles can also contract and stretch, thereby eliminating fatigue and continuing to experience the joy of success.

(3) The amount of exercise and difficulty can be controlled by yourself: continuous 5 minutes, up to 160 times/min; continuous 7 minutes, up to about 180 times/min, practitioners participate in different rope skipping projects with different exercise time and frequency. Practitioners can choose exercise intensity by themselves.

(4) The equipment is simple and does not require high practice venues, so it is suitable for the development on the secondary school campus.

## **2.4 Characteristics of adolescent growth and development**

The physical development of adolescents (14 – 17 years old) is mainly manifested in body shape and cardiovascular system. The development of adolescents' physical fitness is based on strength, endurance and flexibility. Therefore, when choosing sports, adolescents should focus on sports with moderate intensity and difficulty.

## **2.5 Physical health**

Physical health means that the physiological function is normal, there is no disease, and people's daily needs can be met.

## **2.6 Mental health**

The Third International Mental Health Conference pointed out: "Mental health refers to the development of the individual's mental state to the best, on condition that there is no contradiction in the body, intelligence and emotion".

In "Concise Encyclopedia Britannica", mental health is defined as the best state that an individual presents within the scope of his environment.

Psychologist H. B. English pointed out: Mental health means that people can adapt well to the living environment and can give play to their physical and mental potential.

Mental health can be divided into a broad sense and a narrow sense. The former mainly refers to a person's mental state, while the latter mainly refers to a person's mental process. Self-esteem is one of the measures of mental health, which is closely related to personal self-worth and mental health. The developmental period is extremely important to adolescents, which is a period of qualitative change. Through scientific and reasonable physical exercises, they can promote the development of personal physical self-esteem. Mental health in this study refers to a narrow operational definition, which mainly includes the investigation of adolescents' physical self-esteem.

# **3 Research status at home and abroad**

## **3.1 Foreign research on synchronized rope skipping**

In Canada, the United States, Australia and other countries, there are a certain number of clubs and organizations for synchronized rope skipping. Synchronized rope skipping is called "the most outstanding sports program". In addition, foreign research on rope skipping involves technical research and its impact on human body functions. Kawano H. once pointed out: "Stylish skipping is an effective whole-body exercise that requires the least equipment, the smallest space and the shortest time. Individuals can easily adjust the intensity and duration of the exercise by changing the speed and time." Martin Buchheit also pointed out: "The most prominent feature of pattern skipping is that it can be exercised in a limited space. In addition, skipping requires only one rope." Athos Trecroci pointed out: "The pattern skipping is a widely used non-specific practical method. This is another form of exercise involving upper and lower body movements. During the exercise, the arm rotates the crank while the leg bounces repeatedly in order to maintain a constant vertical beating and landing. Before the end of the exercise, during the continuous beating process, human body needs to re-establish balance and coordinate the movement of

the upper and lower muscles.” Gappmaier E. pointed out: “Flattled rope skipping is a very impactful exercise that requires individuals to jump up, so it is particularly effective in improving balance, coordination, and muscle strength.”

### **3.2 Domestic research on synchronized rope skipping**

Rope skipping, in the process of continuous development, merges elements of the new era and becomes a new sport. As an auxiliary practice method for other competitive sports, it also has an impact on physical health. The relevant literature data are summarized as follows:

#### **3.2.1 Research on the feasibility of synchronized rope skipping in schools**

For rope skipping in extracurricular research in school physical education as early as 1999, in the Chinese school sports magazine, there is an article about rope skipping as a physical education course, which is mainly based on games.

Some schools, while fully implementing sports activities, firstly face insufficient venues, and secondly face other problems such as simple equipment. Therefore, the tricky rope skipping can solve these problems. The equipment used for rope skipping is very simple, and there are not too many restrictions on the venue. Rope skipping is a longitudinal activity that can increase bone density and help students to grow taller. Rope skipping has many characteristics, such as: rope skipping is cheap without site restrictions, and is relatively safe, which can improve students' bounce and physical coordination. On the other hand, rope skipping is relatively simple compared to other sports, and can be started anytime and anywhere in free time. Many researchers have also pointed out that rope skipping does not require high practice venues, it is cheap, and provides room for students to improve their physical flexibility. Various combinations of rope skipping can enrich students' cultural life and sports activities on campus.

In summary, synchronized rope skipping plays a good role in inheriting sports culture. For regional economic reasons, the sports equipment among schools is also different. Therefore, rope skipping is suitable for promotion in schools, and can solve the problem of equipment differences and meet the needs of student development.

#### **3.2.2 Research on the status quo of synchronized rope skipping in schools**

The characteristics of rope skipping make it suitable for the needs of modern youth exercise. In addition, Mo Dali pointed out: “Spread rope skipping can stimulate the enthusiasm of young people to participate in activities, and has the value of developing and promoting sports in technical secondary schools.” Different schools use different methods to promote tricky rope skipping, but teachers have not yet participated in the systematic training. After investigation, Wang Shifeng found that rope skipping in technical secondary schools in Chenzhou is not optimistic, the teaching methods are single, and the teaching effect is not ideal.

#### **3.2.3 Research on the teaching content of synchronized rope skipping**

Transitioning from game to education, rope skipping has 16 methods for short rope skipping and long rope skipping. There are detailed action graphics and basic instructions. In her article, the author Yao Liqin introduced the technical movements and formation skills of rope skipping in detail, which provided a very valuable reference for the formulation of the teaching plan. Synchronized rope skipping integrates various elements of the new era and has developed into a new sport with national characteristics. It is deeply loved by many young people. Lu Zhengrong has done a lot of experiments in his article to prove that synchronized rope skipping is suitable for promotion in technical secondary schools.

#### **3.2.4 Research on the effect of synchronized rope skipping on physical health**

Rope skipping serves as an aerobic exercise. Guo Tianci once pointed out: “For teenagers with weaker physique, rope skipping can improve their endurance, sensitivity and speed, and enhance their physical fitness.” Experiments have shown that rope skipping can well promote the youth's participation in physical education. Positivity can also enhance the physical fitness of young people.

### 3.2.5 Research on the effect of synchronized rope skipping on mental health

Sports are the bridge connecting the subject and the object. In this link, the subject and the object will change and adapt to each other. The psychological level of exercisers in synchronized rope skipping will also be enhanced, and group rope skipping can enable cooperation between multiple people to cultivate students' sense of cooperation, from which students experience fun. Rope skipping has a strong self-mediation effect, which can enhance the mental health of the practitioner, and is full of fun and very attractive to students. Among them, students are full of freshness in the practice of rope skipping and endurance running. They will focus on the practice process and will not feel bored. Instead, their interest in learning will be greatly improved. In the article "Study on the Influence of Athletes' Locus of Control on Mental Health", the author further confirmed through experimental research that there is a clear correlation between self-esteem and mental health, i. e. self-esteem is in direct proportion to the level of mental health. At the same time, Ji Chaoxin used the Sports Status Interest Scale to point out that adolescents can feel their level of improvement through rope skipping exercises, thereby producing a sense of pleasure.

## 4 Results and analysis

In summary, synchronized rope skipping plays a good role in inheriting sports culture. There are still many problems, including regions, schools and lack of professional teachers and skipping materials, physical education teachers have limited opportunities to participate in professional synchronized skipping training, lack of synchronized skipping knowledge, and unreasonable and inconsistent use of equipment. Rope skipping by tricks can well promote the enthusiasm of young people in physical education. At the same time, it can enhance the physical fitness of young people, promote the improvement of self-esteem, and be beneficial to the development of mental health.

## 5 Suggestions

Students' interest in participating in sports is mainly indirect interest, which requires school leaders and teachers to ensure the content quality of physical education curriculum. Physical teachers should realize that the rational and scientific use of synchronized rope skipping in physical education classroom teaching will benefit more students. Schools should actively promote tricky rope skipping, and actively carry out rope skipping performances, and rope skipping summer camp. Physical teachers should be regularly trained so that they can master rope skipping skills and scientific training methods.

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