

# EVALUATION OF THE EFFECTIVENESS OF USING THE METHOD OF "CIRCLE TRAINING" AND THE METHOD OF "DISTANCE TRAINING" TO IMPROVE THE PHYSICAL FITNESS OF INTENSIVE ATHLETICS STUDENTS AT HANOI UNIVERSITY OF PHYSICAL EDUCATION AND SPORTS

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## Abstract:

Intensive physical fitness plays an important role in athletics, a comprehensive development process of many motor characteristics such as: Strength, endurance, flexibility, dexterity, etc. Results of research identifies the means applied in the process of using reasonable training methods in the current conditions of Hanoi University of Physical Education and Sports. At the same time, the research results of the topic also provide specific instructions on the application of such training methods to improve professional fitness, contribute to improving learning methods and improve teaching quality for students at Hanoi University of Education and Sports.

**Keywords:** Circle training method, Distance training method, Expert physical strength, Intensive student.

## INTRODUCTION

In athletics teaching, in order to apply the physical education methods in a way that is appropriate for the content of the teaching and training which help learners to absorb the content of subject effectively. Preliminary investigation show that: The use of training methods in teaching - professional physical training for students has not achieved the desired effect, the combination of training methods to improve professional fitness competence at Hanoi University of Physical Education and Sports is not effective. In particular, the use of method of "circle training" and the method of "distance training" to improve the physical fitness of intensive athletics students - Hanoi University of Physical Education and Sports has not been completely researched. Therefore, determining the effectiveness of using professional training methods for intensive athletics students at the university is an urgent and practical work.

## RESEARCH METHODS

During the study, we used the following methods: Methods of analyzing and synthesizing documents; Method of interviewing seminars; Method of pedagogical examination; Pedagogical observation method; Experimental method of pedagogy; Statistical mathematical methods.

## RESULTS AND DISCUSSION

### 1. Choosing specialized physical training facilities and methods for intensive athletics students of Hanoi University of Physical Education and Sports

Selecting means and methods of professional physical training for research subjects through interviews with 30 coaches, experts, lecturers, colleges and fitness centers throughout country with training - teaching students, athletes such as Hanoi University of Physical Education and Sports, Bac Ninh University of Sports, etc which directly do the teaching - train students and athletes. As a result, 04 tools were applied to the method of "distance training", including: Exercises with full breaks, Exercises with excessive breaks, Exercises with intense breaks and Exercises with mixed breaks; 05 devices applied to the "circle practice" method to improve the physical fitness of students, including: Exercises with tools, exercises with antagonistic forces, exercises with elastic force, exercises with environmental resistance force and exercises with extra weight.

### 2. Selecting excersises of using method of "circle training" and method of "distance training" to develop professional physical strength for intensive athletics students at the Hanoi University of Physical Education and Sports

To select exercises applied in the process of

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using two methods "circle training" and "distance training" to develop professional physical strength for intensive athletics students at Hanoi University of Physical Education and Sports, we have conducted on the following grounds: Based on the task of teaching - training, based on the principles of teaching - sports training, based on characteristics and subjects of teaching - training, based on the use of teaching methods - sports training and based on the characteristics of physical development process.

Results: In the research process, we selected 18 exercises to develop professional fitness used in the method "circle training" and 11 exercises to develop professional fitness used in the method. "Distance training". Exercises include:

Exercises used in method "circle training": Jumping and changing legs continuously; Lifting thigh in one place; 30m running with high starting; long jump; 30 m running with high speed; Jump over obstacles 80 - 100 cm high; Using thigh to pull a rubber band with a fixed end; Jumping legs on one spot; Jumping up from padding combined with lifting thighs close to the chest on sand; Long jump 3 steps and switch legs; Sitting on a high platform, feet rise up; 60m running with high start; 2 steps to perform high jump to touch object; Weightlifting combining stand up and sit down (near maximum weight); High jump with legs carrying sandbags; A rubberband fixed at 1 point around abdomen and running; Lift your thigh for 15 - 20 seconds and jum and switch legs in 30 seconds.

Exercises used in "distance teaching" method: 30m high-speed run repeatedly; Jumping exercises; Running and back kicking with prescribed distance; long jump; Jumping over obstacles exercises; 60m running with high start repeatedly; Running with variable speed; running over hurdles; Running on the sand (jumping, raising thighs); Exercises with dumbbells (weightlifting stand up and sit down, weightlifting and rising thighs, weightlifting and jumping); Exercises with antagonistic forces (jumping with sandbags).

Before starting to create a training program for two methods "circle training" and "distance training". We conducted interviews with teachers,

coaches, and experts about the extent to which stations used to develop athletic fitness in Athletics, the results show that: Priority ratio of the number of stations in method "circle training" is 6 stations with the highest number of selection (96.67%), of which 19/29 selected opinions account for 65.52% in priority. Based on the use of stations, we will build exercises to improve the physical fitness of professional athletes.

### **3. Application of the "circle training" method and "distance training" method in developing physical fitness for intensive athletics students - Hanoi University of Physical Education and Sports**

#### **3.1. Research organization: Our test subjects consisted of 30 men and women who are intensive athletics student of Hanoi University of Physical Education and Sports ( course 36 and 37)**

- Group 1: Including 15 students specializing in athletics, this group is trained according to the "circle training" method.

- Group 2: Including the 15 remaining students specializing in athletics, this group is trained with "distance training" method.

The tests used in assessing professional fitness for students: Long jump (cm); high jump (cm); Long jump with 3 steps (cm); 30 m run with high start (s); 60 m run with high speed (s).

#### **3.2. Pedagogical experiment results**

Test results before pedagogical experiment: Before conducting experiments, we conducted physical fitness testing in two groups through selected tests. The results show that: Test results in 05 tests to assess the level of physical fitness for 2 groups are not different ( $t_{\text{calculated}} = 1,299; 1,733; 1,867 \dots < t_{\text{table}} = 2,048$  at probability threshold  $P > 0.05$ ). This shows that, before conducting experiments, the level of physical fitness of the two groups is equal.

Test results after experiment: After finishing the 10-month process of experiment (end of a school year), the research subjects have been fully trained in the system of exercises applied in 2 groups of methods "circle training" and "distance training" that the topic has identified, we conducted a test of fitness level of 2 groups through the selected tests. The results show that:

In all contents of the assessment and evaluation of professional fitness level of the two target groups, there were significant differences ( $t_{\text{calculated}} = 3,109; 3,283; 3,411 \dots > t_{\text{table}} = 2,048$  at threshold  $P < 0.05$ ). This difference initially showed that the "circle training" method has brought about a more pronounced improvement in the physical strength of study subjects than the "distance training" method.

Comparing the effectiveness of the "circle exercise" method and the "distance training" method

After a 10-month experimental period of the two research groups, aiming to evaluate the nature of the difference and effectiveness of two methods "circle training" and the method "distance training", we conducted a test using the test  $X^2$ . The results are presented in Table 1.

**Table 1. Comparison of the effectiveness of the "circle exercise" and the "distance training" methods**

Level	Method		Total
	Circle training (n = 15)	Distance training (n = 15)	
Excellent	9	4	13
	6,500	6,500	
Good	6	4	10
	5,000	5,000	
Average	0	5	5
	2,500	2,500	
Weak	0	2	2
	1,000	1,000	
Total	15	15	30

From the results in Table 1,  $X^2 = 19,948 > X^2_{\text{table}} = 15.5$  at freedom = 8 is obtained with probability threshold  $P < 0.05$ . This shows that the difference between the two methods "circle training" and "distance training" method has identified a difference in the threshold of statistical probability needed.

From the above research results, over a period of 10 months of experiment (for 2 semesters) for 2 groups of study subjects practicing by 2 methods "circle training" and "distance training" show that: The research process has found a combination of methods in training to improve the physical strength of athletics subjects that the previous researches have not done, these methods show the

effectiveness in improving the physical fitness of the study subjects. However, "circle exercise" method has achieved a much higher efficiency than the "distance training" method in improving the physical fitness of intensive athletics students at the Hanoi University of Physical Education and Sports.

**CONCLUSION**

- In the research process, 04 devices has been selected for applying in the "distance training" method and 05 devices for "circle training" method to improve the physical fitness of research subjects. At the same time, we also selected 18 specialized exercises applied in the method of "distance training" and 11 specialized exercises applied in the "circle practice" method to improve physical fitness for intensive athletics students of Hanoi University of Physical Education and Sports. After 10-month experimental period with two groups, there was a significant difference ( $t_{\text{calculated}} > t_{\text{table}} = 2.048$  at probability threshold  $P < 0.05$ ). This shows that the system of professional exercises applied in the "circle practice" method brings a much better effect than the exercises applied in the "distance training" method.

**REFERENCES**

1. Aulic. I.V (1982), *Assessing the level of physical training*, Sports and Physical Publishing House, Hanoi.
2. Dam Quoc Chinh (2000), *Researching the fitness suitability (from a pedagogical perspective) in order to improve the recruitment efficiency and predict the performance of young athletes running 100 m in Vietnam*, *Doctoral Thesis in Education Studies*, Institute of Sports Science, Hanoi.
3. Harre. D (1996), *Training theory*, (Translation: Truong Anh Tuan, Bui The Hien), Sports and Physical Publishing House, Hanoi.
4. Philin. V.P (1996), *Theory and method of young sports*, (Translated by: Nguyen Quang Hung), Sports Publishing House, Hanoi.

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