MODELING TRAINING TECHNICAL HIGH PERFORMANCE MALE GYMNASTICS

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Abstract

The modeling represents a way through the thinking is led to finding the truth, which is a process helped by other samples, due to analogical reasoning. The model is a material and theoretical system, which develops to another scale, a structure – elements and their relation – of another system that we are trying to understand. The original one, as an object, phenomenon or a real process is developed by the help of the model. This way, the reality's knowledge is indirectly through the same model. The process of constructing model is called modeling. This process has as a target the initialize in analogical reasoning's employment, the finding of objects' and phenomenon's new properties, through these models' studying.

Keywords*: physical training, technical training, model, modeling.*

Introduction

Current artistic gymnastics is characterized by a great dynamism, amplitude and execution risk, requiring a higher level of precision and expressiveness in terms of execution of technical elements.

In sports training and skill improvement accumulated numerous theoretical and practical knowledge. Now solve the contradiction between the huge amount of knowledge gained and opportunities limited and relatively constant accumulation, sending large amount of knowledge in an increasingly shorter turns out to be the main task in the preparation.

Change continues to special requirements contained in the code of points and permanently change the value of the various elements leads to the requirement of permanent adaptation of the training process, especially in the high performance gym, where these adaptations need to be very quick to optimal results in competitions.

Obtaining and maintaining the world ranking performance is the fundamental objective of this process of preparation solving tasks formulated the concern of both the specialists and the gymnasts at this level.

We conducted this study based on the following assumptions:

1. my direct and active involvement in the preparation of high performance artistic gymnastics;

2. top performance artistic gymnastics world by men in our country;

3. trends of global artistic gymnastics, which may result in the following aspects: maximum safety performance, technical perfection and aesthetic; eliminate monotony, unilateralism executions default the spectacular increase their permanently change the competitive system in strict relation to the need to "show" - the direct involvement of the media and advertising.

Theoretical issues of

About model and modeling

Modeling is a way of thinking is the thing that led to the discovery of truth by means of models, thanks to analogical reasoning.

The model is a theoretical material or reproduce, in another scale, structure - elements and relations between them - another system that we intend to meet him. The original object, phenomenon or real process is reproduced with the model.

Reality knowledge is done as indirectly through the model. Building models is called modeling. To model started using analogical reasoning, the discovery of new properties of objects and phenomena by studying their patterns.

The model should be efficient, simple as the original, relevant and representative. The model reflects objective reality, but only summary. He does not exhaust the original, is more homogeneous and more abstract than this.

The original is an open system, and the model is a closed system. The model must be accurately quantified to have quantitative and qualitative parameters.

Qualities required driving performance gymnastics

Gymnastics is a sport branch that require upper limits of the body, the level of development achieved to date may recommend classification of sports gymnastics in "extreme sports" and this required a continuous and systematic work, perseverance, aiming to develop motor skills, training and learning a bulky luggage, varied and difficult mental exercises and education qualities.

This raises the need of knowing the level of expression of motor skills that underlie learning and execution of any exercise, the knowledge necessary motor skills, but in a complex form since the movements are executed with a certain combination of strength and speed, with a certain amount of the different angles of action of muscle chains and levers bone in the body, knowing that the center of gravity of the gymnast must climb to 250-260 cm, there are phases of flight with multiple rotations and where the carrying devices, they land often about the second floor.

The technical content of the exercises on machines

Floor exercises predominant manner consists of acrobatic jumps , combined with other elements such as parts Gimn force mobility movements, stands hands and dance combinations, constituting a harmonious whole and upbeat, with a maximum duration of 70 seconds, which is conducted over the whole surface of the ground (12 m x 12 m).

Pommel horse. Pommel horse exercise is characterized by execution in support and all parts of the horse swinging pendulum and the various forms of circular swings with your feet together or apart. It can run via standing swinging hands with or without rotation. When this device is not permitted parts of force, all items are made ??of balance without any interruption.

Rings. Year rings are characterized by elements of elk, force and maintenance, distributed in roughly equal numbers.

Jumping. Jump is made of a moose and fight with both feet on the trampoline and short support arms on horseback. Jump can contain one or more rotations of the body.

Parallel Bars. Parallel exercises include moose and flight ele-

ments with different transitions between hanging and support.

Horizontal bar. Exercise the fixed bar is characterized by a dynamic presentation containing elements elk, turns and lift off without stopping near and far made ??bar and various outlets of the hands .

Evaluation

Assessment in sport is a complex didactic nature that is measured and assessed predispositions acquired vocational and performance capacity of athletes in the process of training and competition.

The research hypothesis

Based on the assumptions set out above and from bibliographic study conducted consider technical knowledge of gym high profile performance at the current model enables the anticipated performance of the gymnasts who will compete in the next Olympic cycle.

Organizing and conducting research

Direct contact with the best gymnasts in the world today (both in our country and abroad), and study their exercise videos led to the preparation of this study. The exercises analyzed in terms of the technical elements recovered in FIG code of points are presented in major competitions: JO, CM, CE and stages of the World Cup in the range of 2008 to the present, a period that covers the current Code of Points .

From the study of the technical content of the material contained in the code of FIG score it is noted that certain groups of elements provides a limited range from the point of view of the great difficulty because of this international regulations provide opportunities for combinations of elements less difficult, but their connecting leads directly to the increase in the amount thereof.

This kind of difficulty I will mention under the name of “combinations” and specifying which group elements belong. The study was structured on all 6 machines and watched the contest submission frequency of various technical elements of great difficulty.

Gymnastics exercises were studied following countries, considered by experts to be the most representative: Romania (8) Russia (8) Belarus (5) Ukraine (6) China (6), Japan (6), the United Emirates (6) Germany (5), France (4), Italy (4), Greece (3) Bulgaria (3), Spain (3) , in that order , totaling a number of 67 gymnasts.

In terms of physical preparation we used the rules and control samples used gymnastics Olympic team of our country, including:

• Tractor hanging on horizontal bar - maximum number of repetitions against time 20 sec. = Minimum 18 correct executions.

• Pushups in parallel support arms to further load of 5 kg (with sandbags attached to the ankles) - maximum number of repetitions against time 20 sec. = Minimum 30 correct repetitions.

• Simultaneous lifting the torso and legs lying - maximum number of repetitions against time 20 sec. = Minimum 25 correct repetitions.

• Jumping up - down on both feet simultaneously on the box cover of the gym (h = 40 cm) against time 20 sec. = Minimum 21 correct repetitions.

• Support continued square least 10 seconds.

• Raising the trunk of the facial bed box gym, feet fastened outside surface core support - maximum number of repetitions against time 20 sec. = Minimum 30 correct repetitions.

Data analysis and interpretation

Floor

1. Group 1 elements (parts of balance, strength, mobility): most gymnasts appeal to value elements C, less B, although none of these elements (B or C) without difficulty bonus. The highest frequency - 31 cases - have = lifting force remained standing on hands 2 seconds. the square remained high 2 sec. -24 Cases = lifting force on hands sitting side support (inverted cross) maintained 2 sec.

2. Group 2 elements (jumps, tours and circles): most gymnasts perform D - value elements, but there are elements of great difficulty - 12E. The highest frequency - 61 cases = combinations pivot circles with both feet together and apart .

3. Group 3 elements (parts acrobatic earlier) : all gymnasts running value elements D. frequency largest - 67 cases = return jumps forward longitudinal axis.

4. Group 4 elements (parts acrobatic back) is observed equilibrium value of the items D and E. The highest frequency - 18 cases = double Tsukahara with 1/1 or more return (D) = -11 cases double jump spread (D) = double jump -15 cases grouped with 2/1 turn (E) -13 cases = double jump down with 1/1 turn (E).

5. Group 5 elements (parts acrobatic jumping sideways and back with Iŧurn): most gymnasts appeal to elements of value D. The highest frequency - 31 cases = bounce back with Iŧurn and double jump forward group.

Pommel horse

1. Group 1 elements (swinging one foot) items in this category are limited, the difficulty of code points, most gymnasts perform a valuable asset B. The highest frequency - 39 cases = double scissor backward or forward with Iŧurn before and Iŧurn back.

2. Group 2 elements (circles and circles on with or without pivot and stands on hands): in this case the distribution is greater difficulty elements, predominantly, though elements of value C. The highest frequency - 26 cases = 1/1 the pivotal support side of the two circles © -11 case = 1/1 or 3/2 the pivotal support side of one circle on (S) -3 case = 1/1 and 3/2 on the pivotal side of a support single circle (E).

3. Group 3 elements (public transport and lateral support transverse support) elements predominate value D. The highest frequency - 58 cases = transport Magyar (3/3)

4. Group 4 elements (passes dorsal and facial) feature prominently D. The highest frequency value - 39 cases = facial Russian with 3/1 turn or more.

5. Group 5 elements (downhill) prominently feature value D. The highest frequency - 55 cases = descent passing through the hands and sitting on 1/1 turn in circles and circles on.

Rings

1. Group 1 elements (deadlifts and moose items) prevails valuable items B and C. The highest frequency - 38 cases = Li Ning (B) = -17 cases stretched Honma.

2. Group 2 elements (swinging stand hands): C prevails valuable items.

The highest frequency - 67 cases = forward or backward giant hands remained standing 2sec.

3. Group 3 items (swings in maintaining the force element) elements predominate value D. The highest frequency - 29 cases = upside down cross

4. Group 4 elements (elements of power and maintenance) D value elements predominate , but there are elements of E. The highest frequency value - 24 cases = Hirondelle (support arms along the body) remained 2sec. (D) - 10 cases = the force for lifting Hirondelle tilted laterally maintained 2sec. (E).

5. Group 5 elements (downhill) prevails valuable items C and D. The highest frequency - 34 cases = double jump back down - 19 cases = double jump back grouped with 2/1 turn.

Jumping

When jumping , the analysis we made a note on the frequency of departure (the amount of code to jump points). The gymnasts have turned to jump - start most often in notes 9,80 and 9,60. As a structure prevailed in spindle turns jumping longitudinal and stretched body, except for the cross shaft return.

Parallel Bars

1. Group 1 elements (balance the two support bars) predominate valuable items C and D. The highest frequency - 21 cases = Diamidov - 17 cases = from sitting on an arm support Heally in (D).

2. Group 2 elements (swinging his arms) prevails valuable items C and D. The highest frequency - 31 cases = leap forward in the support arms (C) - 28 cases = Tippelt

3. Group 3 elements (impetus hung on 2 bars) predominate valuable items C and D. The highest frequency - 33 cases = giant back with Iör 1/2 turn in standing on hands. 16 cases = giant back with 1/1 turn in standing on hands.

4. Group 4 elements (power and maintenance, working on a side bar swinging leg) C prevails valuable items. highest frequency - 39 cases = referral to support standing square and lifting hands in force.

5. Group 5 elements (downhill) elements predominate value D. The highest frequency - 44 cases = double jump back to square.

Horizontal bar

1. Group 1 elements (swinging extensive hung with or without return) value B elements predominate, but there are also elements C, D and E. The highest frequency even - 39 cases = gigantic forward with ˝ or 3/2 return (B) = -27 cases gigantic back to 1/ 1 or 3/2 back in the socket cubital.

2. Group 2 elements (separation): in this case the elements encounter a wide variety of more than C and D, and E and SE. The highest frequency - 33 cases = cases = Tkatchev © Tkatchev stretched -18 (D) -14 = Kovacs stretched or square cases (E) -2 cases = Kovacs stretched with 1/1 turn (SE).

3. Group 3 elements (near the front) is the balanced type in terms of the distribution of the elements difficult. The highest frequency - 17 cases = Endo (B) = -16 cases Endo ˝ return the square standing on hands - Endo in 12 cases = square with 1/1 or 3/2 sitting back in your hands (D) - 17 cases = Endo in the square with 1/1 or 3/2 home in hands sitting on cubital outlet (E).

4. Group 4 elements (plugs cubital and hung dorsal and dorsal position elements) elements predominate C. The highest frequency value - 38 cases = giant Russian ©

5. Group 5 elements (downhill) prevails valuable items D and E. The highest frequency - 32 cases = double jump back down to 1/1 turn (D). -22 cases = double jump back down to 2/1 return (E).

Combinations. All gymnasts, invariably turn to combinations of simpler elements, which direct binding gives grant a higher level of difficulty, although the current trend is of superior individual elements of great difficulty. These combinations are possible especially on the ground in front detachment fixed bindings, especially the pommel horse.

Conclusions and proposals

1. Precise systematization of the entire technical content of

gymnastics led to orientation training, especially at the basic level required, given that there were many world top gymnasts who did not have difficulty elements of certain groups of elements;

2. In terms of technical performance gymnasts of the future Olympic cycle, Baggage must master a large element of difficulty in all groups of elements;

3. Even if necessary (through better use of the difficulty in scoring code) execution singular elements of great difficulty, combinations of simple elements will not be neglected as a return on their perspective, especially due to their extremely spectacular;

4. Gymnasts who reach this level, you must have a very solid core motor skills, physical training requirements are minimal Olympic;

5. Ground training will be extended to return the elements transverse axis, predominantly those currently returning longitudinal axis;

6. Horse training should be modeled on any special requirements or constituting this new device, currently a global model;

7. Technical training rings are mostly conditioned motor support of gymnastics most difficult elements present no technical problems;

8. Jumping gymnasts will need to acquire both structures need to return the longitudinal axis and the transverse axis;

9. The difficulty of parallel elements can be acquired only after execution of technical accuracy, both swings in support, and those hung as;

10. The horizontal bar performer requires a model of the future technical baggage greater accuracy of detachment, separation combinations are essential to this unit.

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