

A Comparative Analysis of Chinese College students' Health and vigor Competition: a case study of the 13th and 14th competitions

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ABSTRACT. *This paper takes the Chinese University Student Health and Vitality Contest as the research object, and uses the methods of literature review, expert interview, comparative analysis and statistical analysis to compare the 13th Chinese University Student Health and Vitality Contest with the 14th Chinese University Student Health and Vitality Contest. Through the analysis of the number of participants, the set of time, the set of five-person exercises and the set of AEROBIC DANCE exercises, the following conclusions are drawn: the popularity of aerobics in colleges and universities has increased; Changes in competition program settings and shortening of competition routine time; The number and coefficient of difficult movements increase as the number of five-person exercises and transitional connections increase. New Period has clear requirements for AEROBIC DANCE and the content is richer. In line with the development trend of contemporary aerobics*

KEYWORDS: *College students; Health vigor Competition; Comparison*

1. Introduction

Competitive aerobics is a kind of sport which can express continuous, complex and high intensity aerobics ability under the accompaniment of music. Competitive aerobics rules are the standard of impartial law enforcement, and it is also the basis for athletes and coaches to create and complete the quality of movements. With the promulgation of the new cycle rules of FIG in 2017 / 2020 edition, the use of the previous cycle is revised, so as to further reflect the characteristics of competitive aerobics, make its development trend more clear, and the competition is more fair and fair. The new cycle rules guide the development direction of professional technology, and will certainly bring the reform and innovation of training ideas and training means. The topic of this paper is to participate in the two Chinese college students' health and vitality competitions, and to have a certain research on the competition and rules, thus laying a firm foundation for the study of this paper. The development of competitive aerobics for a long time has promoted the continuous

renewal and improvement of the rules, and the revision of the rules has also guided the direction of the development of competitive aerobics. The 14th Chinese College students Health and vigor Competition further embodies the development characteristics of aerobics events and makes its development trend more clear, so as to guide the reform and innovation of aerobics training in colleges and universities, so as to lay a foundation for improving the competition performance of athletes.

2. Research content

2.1 Subject investigated

This study is a comparative study of the 13 th and 14 th Chinese College Students'Health and Vitality Competition.

2.2 Methods

(1) Document method

According to the needs of the research, the relevant media such as the library of JiangXi Normal University, the Chinese knowledge network, the Chinese periodical network, the Wanfang database and the China Sports Information Network are used to study and analyze the relevant materials, and the present situation of the research field is obtained from a plurality of aspects, The paper guides the paper from the theory, and provides the basis for the research and design.

(2) Expert interview method

Through the interview and exchange of the relevant experts, the experts have made a valuable contribution to the research, and made a profound study on the change of the new cycle and the development of calisthenics in colleges and universities.

(3) Comparative analysis method

The content of calisthenics project of the 13th and 14th Chinese college students' health vigor competition is compared, and the characteristics of the changes are analyzed.

(4) Mathematical statistics method

Using excel software, the data of aerobics parameters, such as number of parameters, items, overconnection, difficulty and operation, are analyzed.

3. Result

3.1 Changes in the number of participants

Table 1 Changes in the number of persons n=2

group	13TH SESSION	14TH SESSION	PERCENTAGE(%)
NUMBER OF SCHOOLS	71	109	65.14
NUMBER OF PEOPLE	885	1405	62.98

According to Table 1, there are 71 participating schools in the 13th class, with a total number of athletes of 885. The number of participating schools in the 14th class increased by 65.14 percent compared with the same period last year, and the number of students increased by 62.98 percent compared with the same period last year. It shows that aerobics is known to the public as a cultural phenomenon of the crystallization of physical education and art in the process of the development of education and teaching in colleges and universities, which accelerates the development trend of aerobics in colleges and universities, which leads to the increase of the 14th school and the number of people.

3.2 Changes in the time of the complete set of movements in the competition

Table 2 Set time changes (seconds) n=4

order number	MIXED PAIR	THREE-MAN OPERATION	GYMNASTICS FIVE.	AEROBIC DANCE
13TH SESSION	90	90	90	90
14TH SESSION	80	80	80	80
TEMPORAL CHANGE	10	10	10	10

As can be seen from Table 2, the 14th Chinese college student's healthy dynamic competition time was changed from 90 seconds to 80 seconds, although it was reduced by 10 s in time, but remained the same in the composition of the whole set of actions, and the integral part of the whole set of actions must include a consistent operation. The act of the invention, the subject content, the difficulty action, the transition connection and the moving route. It is required that the calisthenics player, in a shorter period of time, be able to show the complete set of actions in the most significant, dynamic and passionate way, and the strength and density of the complete set of actions can be improved, and the intermittent time of the technical connection of the athletes in the process of completing the complete set of actions is reduced. And a higher requirement is put forward for the physical fitness of the athletes and the improvement of the oxygen-free capacity.

3.3 Changes in competition settings

Table 3 Changes in competition settings(n=8)

order number	SINGLE GYMNASTICS	MIXED PAIRS	THREE-PERSON GYMNASTICS	GYMNASTICS FIVE.	AEROBIC DANCE)	AEROBIC DANCE (BIG GROUP)	FITNESS LIGHT EQUIPMENT	CAMPUS AEROBICS
13TH SESSION	无	有	有	有	有	有	有	无
14TH SESSION	有	有	有	有	有	无	无	有

It can be seen from the table that the 13th competition project has a mixed double, three-person operation, five-person operation, an aerobic dance, an aerobic dance (large group) and a body-building light device, and the 14th competition program has one-person operation, a mixed double person, a three-person operation, a five-person operation, an aerobic dance and a campus body-building exercise. In the 14th competition, the project has many single-person exercises and campus body-building exercises, and the aerobic dance (large group) and body-building light device are deleted. With the updating and perfection of the rules of the competition, the events of the competition are constantly updated, and the development process of calisthenics is accelerated.

3.4 Analysis of the operation of the five-person operation

Table 4 Changes in five-person exercise

order number	ITEM	LIFT	MANIPULATION	TRANSITION	COORDINATE	DEGREE OF DIFFICULTY
13TH SESSION	GYMNASTICS FIVE (male)	2	11	7	3	4
13TH SESSION	GYMNASTICS FIVE(F)	2	13	6	2	5
13TH SESSION	GYMNASTICS FIVE(mixed)	2	13	6	3	4
14TH SESSION	GYMNASTICS FIVE (male)	1	8	8	5	9
14TH SESSION	GYMNASTICS FIVE(F)	1	7	8	3	9
14TH SESSION	GYMNASTICS FIVE(mixed)	1	7	9	4	9

The 2017 edition of competitive aerobics rules stipulate: mixed doubles, three people, five complete sets of movements to do a maximum of 9 difficult movements, mixed doubles, three people, five people only need one lift.

(1) Analysis of the difficulty of complete sets of movements

Through the comparison of the 13-and 14-th sessions, the number of the five-man and five-man exercises of the five-man and the five-man-man of the man is five, four and five more than that of the 13th. The difficulty action is the core element of the complete movement of the competitive calisthenics, and it is also the embodiment of the athlete's competitive ability. the increase of the difficulty action is more strict to the athletes' competitive ability and the training level of the coach, the creation of the action is to highlight the characteristics of the difficulty of the calisthenics, the completion capability of the difficulty action and the high-precision finished quality, The more strict requirements of the college in the exercise of calisthenics, the training plan, the training content and even the sports technology are adjusted reasonably, so as to adapt to the requirements of the events of the new cycle, so that the head can be drawn up in the competition.

(2) Analysis of lifting movements in complete sets of movements

The lift action is very textual to the tacit understanding between teammates. The new cycle rules can help teammates increase the tacit understanding and trust between each other, and at the same time create more novel lifting movements to make the complete set of movements more perfect. From 3.4 table, we can see that the 13th complete set is two lifting actions, and the 14th complete set of lifts is modified to 1, and gives a complete set of scoring standards, which can more reflect the value of the lift, and can encourage coaches to innovate constantly in the creation, thus increasing the appreciation of competitive aerobics and making athletes pay more attention to the lift.

3.5 A Comparative Analysis of the Aerobic Dance

(1) The concept of aerobic dance

<2017-2020: The Sports Aerobics Scoring Rule> defines the aerobic dance: the team is a group of eight athletes who use the dance method to complete the calisthenics, the second style is 4-8 eight-shot street dance movement, and the complete set can include the skill action and the difficulty action, but there is no score. The score of the match is mainly composed of the score of the art and the completion of the scoring, the creation of the whole set of action and the quality of the completion.

(2) Comparative Analysis of complete sets of Action Coordination

Table 5 Statistics of coordinated actions

order number	SUBJECT OF ENTRY	PERFORMANCE COOPERATION	DYNAMIC COORDINATION	TOTALITY
13TH SESSION	Aerobic dance	1	1	2
14TH SESSION	Aerobic dance (male)	3	1	4
14TH SESSION	Aerobic dance (female)	3	2	5
14TH SESSION	Aerobic dance (mixed)	2	2	4

< FIG Aerobic Gymnastics 2013 CODE OF POINTS > definition: cooperative action is the relationship between athletes when they complete their movements on the ground. With the development of society, some scholars divide the coordination movements in aerobic dance sets into two kinds, namely, “dynamic cooperation” and “performance cooperation”. In recent years, the evaluation of aerobic dance is more in favor of the addition of performance cooperation, performance cooperation is more in line with the artistic development of aerobic dance projects, but also more in line with the current development direction of aerobic dance projects. From 3.5 table, we can see that the total number of aerobic dance cooperation increased by 2, 3 and 2, respectively, the performance cooperation increased by 2, 2, 1, respectively, and the dynamic coordination increased by 0, 1, 1, respectively. From the quantitative point of view, the increase of aerobic dance coordination was mainly based on performance coordination. It shows that performance coordination is the general trend in the arrangement of complete sets of movements, which accords with the development trend of contemporary aerobic dance and attracts the attention of the referee and the audience, so the higher the requirement of athletes' physical fitness.

(3) Contrastive Analysis of the formation of complete sets of movements

Table 6 Formation for analysis.

order number	SUBJECT OF ENTRY	FORMATION	SECOND STYLE
13TH SESSION	Aerobic dance	16	Manipulation
14TH SESSION	Aerobic dance (male)	self-made	hip-hop
14TH SESSION	Aerobic dance (female)	self-made	knight
14TH SESSION	Aerobic dance (mixed)	21	hip-hop

The formation change of aerobic dance event refers to the change of track, direction and space through replacement in 10 × 10 m aerobics field. Compared with

the prescribed movements of the 13th session, the formation of the 14 sessions puts forward new requirements for the creative ability of coaches and athletes on the basis of not changing the original movements: fast and smooth, novel change process, clear movement trajectory, can show diversity of mobile formation, there are obvious differences before and after the formation change, to reflect the fluency, originality and complexity of the rules.

(4) Changes in the second style of the complete set of movements

The 2017 edition rules stipulate that the dance content including the second style in the complete set of movements will be evaluated. As one of the characteristics of aerobic dance items, the second style dance content is an indispensable element different from other aerobics items. From Table 3.6, it can be seen that the second style of the 14th session is hip-hop and jazz style, while the second style of the 13th class is dominated by the style of manipulation, which shows that the 14th session is obviously more characteristic than the second style of the 13th class. The rhythm of the dance is dynamic, giving people the feeling of frank, relaxed and passionate vitality, which can attract the audience and enhance the appreciation.

4. Conclusion and Suggestion

4.1 Conclusion

1) By the number of the 13th and 14th Chinese college students' vitality competition and the comparison of the school, the number of the number and the number of schools in the 14th competition is on the rise, and the development trend of calisthenics in colleges and universities is very good.

2) The time of the new cycle rules for the competition project is reduced by 10 seconds, the oxygen-free capacity of the athletes is improved, the change of the setting of the competition project is the improvement of the athlete's ability and the display of many aspects

3) The increase of the number of operation actions increases the requirement of the coordination ability of the athletes, the increase of the transition connection and the cooperation makes the competition more ornamental, the change of the difficulty action promotes the reform and the innovation of the aerobics training method of the university, and further improves the competitive ability of the athletes.

4) The second style is based on the formation of hip-hop jazz, which puts forward new requirements for the creative ability of coaches and athletes, so that it is more ornamental.

4.2 Suggestion

1) Comprehensive and scientific training to improve physical fitness and anaerobic metabolism of athletes. The continuous development of aerobics is

becoming more and more difficult, complicated and diversified, and the requirements for athletes to complete the complete set of movements are becoming higher and higher. The pursuit of high difficulty to develop athletes' technical skills cannot be the criterion to judge the athletes' ability to participate in the competition at this stage. Athlete's physical quality is the most important in the competition, is the key to influence the skill level, has the good physical quality to make the cushion can lay the foundation for the athlete to display the huge potential in the field, obtains the outstanding sports result.

2) It is recommended that calisthenics instructors, athletes and related personnel carefully study the new cycle rules of FIG, grasp the spirit, keep pace with the times, master and be able to use the new cycle rules flexibly, and can quickly improve the level of competitive aerobics.

3) It is suggested that coaches and athletes make full use of the innovative part of the rules in the process of creating complete sets of movements, actively absorb excellent elements, stimulate the potential of innovation, and make the creation of aerobics more novel and ornamental.

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