

# Exploration of the Development Path of Aerobics under the Change of Competition Rules

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**ABSTRACT.** With the continuous advancement of development, aerobics has differentiated into competitive aerobics and mass aerobics, and it has kept pace with the times and developed vigorously. During the development of the project, the rules have always been like a weather vane, guiding the development of aerobics. The development of aerobics also promotes the continuous improvement of the rules. Using literature method, expert interview method, observation method and comparative analysis method, the development period of aerobics rules is divided into stages, and the changes in the rules of each stage are analyzed. At the same time, the representative aerobics routines in the early and late stages of each stage are analyzed. A complete set of content to verify the impact of changes in rules on sports, and to discuss the relationship between changes under the interaction of rules and sports.

**KEYWORDS:** aerobics, competition rules, development

## 1. Introduction

In the 1980s, with the development of global aerobics, aerobics swept the world. From the birth of competitive aerobics to the international stage, aerobics has experienced the polarization of "competitive aerobics" and "popular aerobics"; the project was initially distinguished by specific actions to now promulgated the rules of competitive aerobics, the rules of mass aerobics are distinguished, so the development of competitive aerobics has become inevitable. After the establishment of the International Federation of Sports ("FIG") in 1881, aerobics was promoted to the international stage[1]. After 18 years of evolution and development, aerobics was officially included in the competition in 1994 and the FIG Aerobics Organizing Committee was established. After the entry of aerobics into the International Sports Federation, the first international rule—"FIG 1994-1996 Competitive Aerobics Competition Rules" (hereinafter referred to as the "94 version of the rules") was introduced in 1995. Up to now, 7 versions of the rules have been introduced. The latest version is "FIG2017-2020 Competitive Aerobics Competition Rules"

hereinafter referred to as the "17th Edition Rules". The continuous revision and improvement of the rules have promoted the promotion and popularization of competitive aerobics[2].

As the project has been promoted and popularized, major competitions have been launched on a large scale. From the first World Aerobics Championships in 1995 to 2020, 15 sessions have been successfully held. Through the holding of major international events, athletes and coaches from various countries have been exchanged and discussed, which has promoted the vigorous development of competitive aerobics techniques. With the development of aerobics projects and technological innovation, the rules of competitive aerobics competition are revised every 4 cycles, perfecting and standardizing the rules of competitive aerobics competition[3-5]. There are now 7 versions of the rules. From the perspective of revision, the revision of each version of the rules is revised around the difficulty evaluation part, the art evaluation part, the completion evaluation part, and the general rule part. From the change in the total number of difficult actions, the total number of difficult actions in the 7 versions is: 114, 203, 335, 331, 353, 336, 288. From the perspective of the changes in the number of difficulty in the set of actions in each item, the 17 version of the rule has 10 single events, and the other items have been reduced from 16-20 in the 94 version of the rule to 9[7]. From the perspective of the judging standard of the difficulty action score, the level has increased from 6 to 1 in the 94 version of the rules. Therefore, it can be seen that the total number of difficult actions and the changes in the number of difficult actions in the set of difficult actions in each item and the changes in the scores of the difficult actions have led to the development direction of difficult actions. Although the number of difficulties has decreased, the restrictions on difficult actions and the increase in the standard of difficult actions have this has had an impact on coaches and athletes, prompting higher athlete training standards[8].

Therefore, this article analyzes the evolution and development of the 7th edition of the competitive aerobics competition rules, and compares and analyzes the five aspects of the difficulty judgment part, the art judgment part, the completion judgment part, the general part and the new items, and discusses the competitive aerobics competition. The influence of the rules on the development of competitive aerobics provides a theoretical basis for coaches to scientifically guide training and improve athletes' technical level.

## 2. Research objects and methods

### 2.1 Research object

This article takes the development of aerobics in my country under the changing competition rules as the research object.

## **2.2 Research methods**

### **2.2.1 Document method**

Consult journal articles and literature, understand the latest development status of the rules in each period, timely grasp the development trend of aerobics at home and abroad and the development trend of the rules as theoretical support, interpret the changes in the rules themselves for each stage, and the changes in the complete set of content. The relationship between them mainly solves the structure of the idea of the whole paper, as well as the reference under the reading of the existing literature, to find out the differences in the structure of other papers, to discover new research ideas, and to find out typical events as the stage the divided reference documents make this paper have reference value.

### **2.2.2 Expert interview method**

Using the expert interview method, based on the changes in the rules and the actual background and special events when the rules were introduced, the authoritative experts provided opinions, revised and agreed with the scientific nature of the stage division, and divided the development process of Chinese aerobics into stages. The interviewer is positioned as an expert who was exposed to aerobics in the early stage and has been devoted to aerobics.

### **2.2.3 Observation method**

Select the competition videos of the early and final stages of each stage, and select the first-placed set of individual competitions. Each individual item of the competitive aerobics competition video includes a complete set of content for women's singles, men's singles, mixed doubles, three, five/6s, and aerobics. The selection rules for popular aerobics in the international stage Routines are video analysis content. Research and analyze how aerobics exercise changes under the rules, as well as the process of change and its reasons.

### **2.2.4 Comparative analysis method**

Using the method of comparative analysis, research the relevant influence of the aerobics competition rules on the development of aerobics, the law of the two changes and the mutual relationship between them, and draw the corresponding conclusions.

### 3. Results and analysis

#### 3.1 Aerobics stage division and stage characteristics

Since the introduction of aerobics to my country and the formation of a competition system, from 1986 to 1999, my country has used nearly 10 self-promulgated rules, and the rules have been revised to a greater or lesser extent almost every year. From 2000 to the present, competitive aerobics all refer to the FIG rules, and the domestic mass aerobics rules are issued by different organizations in my country according to the different participants[9]. Based on the changes in the rules and the actual background and special events when the rules were introduced, after experts provided opinions and recognized the scientific nature of the stage division, the development process of Chinese aerobics was divided into the following three stages according to the rules' introduction time: local landing stage, absorption the introduction stage and the internationalization stage.

##### 3.1.1 The local landing stage

After the introduction of aerobics to my country, in order to adapt to the pace of development of aerobics, the former Beijing Institute of Physical Education established the Aerobics Research Group in 1984. In 1985, 7 people in the research group created the "Youth Rhythmic Gymnastics", which was widely promoted at that time, and completed the sixth of this series. The arrangement and recording of a set of rhythmic gymnastics. Rhythmic gymnastics is based on the characteristics of human body parts, from head to toe according to the body parts one by one. In December 1986, this research group made outstanding contributions to my country's undergraduate education. My country's first aerobics textbook "Aerobics Trial Textbook" was born, offering aerobics elective courses for undergraduates in the College of Physical Education, and promoting aerobics in universities. Spread in groups. In February 1992, the Aerobics and Rhythmic Gymnastics Association of the China University Sports Association was established in Beijing, which opened a broad door to the market for university student aerobics. At this stage, the characteristics of Chinese aerobics rules are many and complex, which are formulated by different organizations, and there are even rules formulated specifically for a competition. One of the earliest rules in China is the "Rules for Aerobics Competition (Discussion Draft)" drafted by the original Beijing Institute of Physical Education, which was only formulated for the first "Great Wall Cup" Aerobics Friendly Invitational Tournament in 1987. After that, three types of characteristics have appeared in China. The competition rules for the general public, the "Aerobics Competition Rules Judgment Law" approved by the Sports Committee of the People's Republic of China, the "National Staff Aerobics Competition Rules" approved by the National Sports Commission Group Department for the employees, and for college students Crowd, the "College Aerobics Competition Rules" formulated by the People's Republic of China University Sports Association Aerobics and Rhythmic Gymnastics Association.

### **3.1.2 Absorption and introduction stage**

In order to promote the exchange of aerobics technology at home and abroad, and to make the nature of the aerobics group more elite, the Aerobics and Rhythmic Gymnastics Association of China University Sports Association was established in Beijing in 1992; the International Sports Federation (FIG) officially accepted the aerobics event was launched in 1994. In order to keep up with the international pace, in 1995, the Chinese aerobics team sent a group of seven people to Paris to participate in the first aerobics championship held by the International Sports Federation[10-11]. Although the results need to be improved, this time the competition is the first time China has participated in an international competition. It has broadened its horizons and laid the groundwork for integrating with international standards. China's official integration with international standards was in 1999. Since then, the 1997-2000 International Gymnastics Federation Aerobics Competition Rules have been used. Aerobics continuously absorbs and introduces advanced foreign technology and concepts. Aerobics projects are flourishing and are divided into two types of sports: mass aerobics and competitive aerobics. Mass aerobics takes the development route of popularization and has a small load. It is suitable for all ages, and continue to attract more people to participate. The mass nature of the first set of mass exercise standards is obvious. Competitive aerobics continues to strengthen its own system, following the revision of FIG international rules, and develops more scientifically and competitively. The characteristics of the aerobics rules at this stage are breakthroughs, transformations and adaptability to the introduction of new things. The changes are the biggest of the three stages, and the stage characteristics are obvious.

### **3.1.3 Internationalization stage**

Since 1995, FIG has held the World Aerobics Championships every year. Since the introduction of the FIG rules, our country has entered the stage of vigorously promoting aerobics. The rules of FIG aerobics are revised and improved every four years each of the rules of FIG[12]. The range of revisions is very stable, with continuous improvement and deficiencies, and detailed scoring, approaching the rigor and norms of Olympic sports events, making the events more systematic and scoring more fair, the projects have their own characteristics, and attract more and different people participate. After FIG signed a joint statement with NANC and IAF in 1997, it was predicted by professionals that aerobics is very likely to enter the Olympics in 2008 or 2012. During this period, the rules are also moving towards this goal, and the conservative attitude is steadily moving forward. But unfortunately, whether it is because of the launch of the "Olympic Slimming Plan" or the aerobics project itself does not meet the standards of the Olympics, the door of the "Olympics" has not been opened to the aerobics project, and the rules after 2012 have also been liberalized. In order to improve the posture, change and improve the future that is more conducive to the development of the project. Under the 2013 version of the rules, aerobic events were added to make aerobics more enjoyable and attract more people's eyes. The project itself has been modified and improved.

Today's aerobics project has entered a mature and stable development period. China has a place in the world championships where powerful nations gather. Every year, the competition has excellent results. The characteristics of this stage are rapid development and rule-making. The mature system and the strong uniformity of rules are a manifestation of authority.

### ***3.2 The relationship between the changes in the rules of each stage and the changes in aerobics***

The changes in the rules of aerobics and the subsequent changes in the development of sports, and the rules need to be changed along with the changes in the sports to lead the development of sports. The relationship between the two in the flourishing of aerobics has been studied and discussed. Walk through the long history from the perspective of development, leaving behind the footprints of research.

*Table 1 Rules of Competitive Aerobics Competition in the International Phase*

Years	Rules	Approval unit
2001-2004	Competitive aerobics competition rules	FIG
2005-2008	Competitive aerobics competition rules	FIG
2009-2012	Competitive aerobics competition rules	FIG
2013-2016	Competitive aerobics competition rules	FIG
2017-2020	Competitive aerobics competition rules	FIG

Competitive aerobics projects in the international stage all quote the FIG rules, and the rules are revised every four years, which is standardized and authoritative; popular aerobics projects are based on the actual situation of the country, and the emphasis is on popularizing aerobics and strengthening fitness. Sports and rich leisure activities, active in campus activities and social activities. In this stage, the changes and development of competitive aerobics and mass aerobics under the international rules are discussed separately, and their relationship with changes.

#### ***3.2.1 Changes in definition***

In the international stage, the definition of competitive aerobics is limited to small changes in the way of expression. From 2001 to 2020, the five FIG rules all define competitive aerobics as: the ability to perform continuous and complex performance under the accompaniment of music, high-intensity aerobics exercises and exercises, which originated from traditional aerobic fitness exercises.

#### ***3.2.2 Changes in competition items***

The three rules from 2001 to 2012 included five competitions, namely women's singles, men's singles, mixed doubles, three-person exercises, and collective six-person exercises. From 2013 to 2020, the rules of collective six-man exercises

were changed to five-man exercises, and aerobic events were added. Two competition contents (aerobic pedal and aerobic dance) were added. Aerobics has a colorful corner, which further reflects the inclusiveness of the project to the participants, making the project colorful, performance and innovation increasing year by year[13].

### ***3.2.3 Changes in competition clothing and appearance***

The internationalization stage is a period of great changes in aerobics clothing and appearance. Starting in 2013, international competitions require a logo or national emblem representing the country on the competition clothing. The 2013 version adds aerobics, but the aerobics clothing is split and one-piece; in the 2016 version of the rules, competitive aerobics can also use aerobics clothing, but it must be tight.

### ***3.2.4 Time and venue changes***

There is no change in the time of the 2001-2009 version of the rules. By the 2013 and 2016 versions of the rules, each version of the rules has reduced the set time of 5 seconds. With the shortening of time, there are higher requirements for the layout of the set, focusing on the artistry of the action. In 2009, the rules of the venue were changed to 10x10 square meters for all events except the 7x7 square meters for single events. The two-period rules have increased the requirements for athletes' physical fitness in the use of venues, and the venues are no longer divided into projects. In the 2013 version of the rules, all sports venues for the adult group are 10x10 square meters, and the latest rules have been changed to use 10x10 square meters except for age groups. This shows the requirements for athletes in all aspects. improve.

### ***3.2.5 Changes in art ratings***

FIG aerobics rules for the revision of artistic scores every year, constantly improving and enriching, and constantly making the quantitative standards more specific, making the score more authoritative. It can be seen from the first three editions of the rules that the quantitative scoring standards are still changing the main items of scoring and the distribution of scores. The main items and scores of the art scores of the last two editions of the rules have not changed, and they are more specific than the previous three versions, it also shows the main items of scoring more clearly. The new version of the rules of judging standards gradually quantifies and reduces the possibility of subjective judgments of referees, and has more objective standards for judging artistic scores.

### 3.2.6 Changes in completion score and difficulty score

FIG has new difficulty every year, as well as deletion difficulty. Under the 2001 version and 2005 version of the rules, the difficulty selection is indispensable. If the group is missing, 1.0 points will be deducted. The rules require the full development of athletes' abilities, but the 2009 version of the rules are slightly relaxed , the difficulty of mistakes does not record the group, the 2013 version is more open, and the group is recorded in the case of the difficulty of the mistake, and the latest version of the rules focuses on the embodiment of the athlete's strong ability, and the difficulty of the four groups can be selected from three groups, which is greatly improved the quality of the complete set of actions allows athletes to use their strengths and avoid weaknesses, fully embody their abilities, and exert their strengths. The change in the number of difficulty shows that the rules continue to select difficult actions with a wide range of applications, and gradually reduce the difficulty of lower utilization. The difficulty of 1.0 point is increasing year by year. The 2017 version of the rules again adds two new difficulty groups (horizontal rotation). Group and Revolute Group), and both groups have a difficulty of 1.0 high.

*Table 2 Variation of the number of difficulties in the rules of competitive aerobics and selection of groups*

Rules	A	B	C	D	Total	Group selection
2001 edition	78	44	185	35	342	Indispensable group
2005 edition	52	53	174	42	321	Indispensable group
2009 edition	63	52	181	56	352	Difficulty of mistakes is not recorded in the group
2013 edition	67	52	165	57	341	Difficulty of mistakes group
2015 edition	71	31	139	45	286	Choose three groups

### 3.3 The relationship between the set of contents and the changes in the rules of mass aerobics in the internationalization stage

At the stage of internationalization, the rules of mass aerobics in my country are numerous and complex, and the rules are in line with the needs of the current competition. Each rule reflects the demand for sports of mass aerobics at that time. It is a relationship between "popularity" and "being popularized". The rules are committed to popularize the complete set of actions and let more people participate[14-15].

In 2004, the second set of mass exercise standards was issued to revise levels 1-6. In 2009, the third set of mass exercise standards was revised and introduced again. The prospects for sports development are promising. The implementation of mass exercise standards is recognized by most people and even included the teaching content in the elective courses for college students was introduced in 2012, which made popular aerobics enjoyable. The self-made movements in popular aerobics sports include exercise-based movements and simple difficult movements. Exercises,

and there are single, double and group events, but it does not cover all people. In 2012, in response to the "Outline of the National Fitness Program", the rules of national aerobics dance were introduced. The items included in the competition system are not limited to aerobics, but on the basis of aerobics, it incorporates elements that can be integrated into sports, dance, etc. The restricted competition system allowed people to actively participate, and the popularity increased significantly. Mass aerobics has changed the previous model and incorporates different elements, but some items still retain the characteristics of aerobics. The seven basic steps are mainly used and different themed movements are incorporated. At the same time, the rules of student aerobics are also in a fixed area. In order to allow students of all ages to experience the fun and benefits of aerobics, the rules are divided into different groups for different age groups. In order to differentiate from competitive athletes, different groups can also be divided according to different professions, resulting in increased popularity of sports.

Although there are many types of popular aerobics rules at this stage, they all adhere to let the mass aerobics exercise exert the effects of fitness and health, and at the same time allow more people to participate, so that mass aerobics is continuously popularized and continuously developed in mass sports. Expanding the scope of the population therefore reflects the relationship between popularization and being popularized.

#### 4. Conclusion

Based on the rules, combined with special events in the development of aerobics, this article uses a variety of research methods to divide the development of aerobics into three stages, including the local landing stage, the absorption stage and the internationalization stage. Through the analysis of the changes in the rules of aerobics at each stage, the characteristics of the rules at each stage are found, the typical complete sets of movements in each stage are analyzed, and the law of changes in aerobics exercises are interpreted from it, and the relationship between the two interdependence and mutual promotion is discussed. Looking at the sports development process under the changes of aerobics rules, in the future, competitive aerobics will continue to develop in a sophisticated direction, while mass aerobics will be more friendly to the masses, develop towards popularization, and be accepted by more people. In short, the emergence, existence and development of aerobics projects are inseparable from the needs of the masses. As the overall project development changes over time, the projects will return to the masses and society.

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