

## Research on the Performance of Excellent Aerobics Athletes Based on Information Technology

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**Abstract:** Performance is one of the key factors for an excellent aerobics athlete to win in Aerobics competition. For the current aerobics teaching, it is urgent to optimize the design and implementation of a virtual aerobics teaching system to achieve modern information-based aerobics teaching. Therefore, based on information technology, the author conducts research on the expressiveness of excellent aerobics athletes. Research shows that the design of aerobics virtual teaching system based on information technology can not only improve the visualization level of the system, but also improve the quality of aerobics virtual teaching and play an active design to realize the value. It is hoped that this study will provide a theoretical and practical basis for the performance training of aerobics athletes in China.

### 1. Introduction

In the competitive aerobics competition, athletes' ability to express beauty is crucial [1]. The expression of the athlete's facial expressions and movements is an important factor in infecting the audience and improving the performance of the competition. Expressiveness is also a comprehensive reflection of the athlete's self-confidence, self-indulgence and ability to surpass the audience, and enthusiasm for the ability of the audience [2]. Aerobics focuses on the cultivation of human physiology and psychology. It combines dance, gymnastics and other elements with beautiful and expressive body movements. It forms a very infectious and complete artistic expression with the cooperation of music. , giving people the enjoyment of beauty [3]. Aerobics expressiveness is based on the athlete's body movements, with the theme of health, strength and beauty. It has the characteristics of aerobics, expressing the inner thoughts and emotions and infecting others through various organs of humans [4]. In aerobics competition, athletes can organically combine their inner emotions through music melody and action, and the performance of external fitness and beauty is the highest expression of art, both expressive [5]. In modern exquisite technology, virtual role technology can be applied to the teaching of Aerobics action skills. Virtual role technology is through role-based modeling technology [6]. At the same time, combined with the technology of skeleton animation, the interactive communication technology between virtual roles is applied to optimize the virtual teaching system of aerobics.

In the current aerobics teaching, with the development of information technology, various assistant teaching techniques are emerging. The so-called expressive power of Aerobics athletes refers to the unity of the inner spiritual temperament and internal movement performance of athletes in Aerobics competitions. It is the embodiment of the level of performing arts and an important factor to improve the performance of competitions [7]. However, in such expressive sports as aerobics, how to infect audiences and referees is really worth pondering and researching [8]. Specifically, it is the athlete's passion and self-confidence shown on the spot and the reflection of communication with referees and spectators through actions, expressions in the whole set [9]. From the current research status at home and abroad, the special research on the expressiveness of excellent aerobics athletes is still very lacking. Therefore, it is very important to strengthen the theoretical research on the performance of aerobics athletes [10]. Through their strength, vitality, glamour, enthusiasm, emotional skill and self-confidence, athletes can attract the audience's ability to continuously communicate with the audience through their eyes, sincere natural facial expressions and vitality. The in-depth analysis of the overall structure of the system and the key

technologies implemented has been carried out to improve the training level of aerobics athletes and to exert positive application significance.

## **2. Factors Affecting the Performance of Aerobics Athletes**

Expressiveness is a form in which people's inner emotions are expressed by external actions. Facial expressions and body movements are concrete means of expressing expression. Through the athletes' understanding of the type of temperament required by the project, it is found that 65% of the respondents believe that aerobics athletes should have a bilious temperament. They believe that athletes of this temperament type can fully express themselves in the game and fully integrate the environment of the game. Aerobics requires beautiful, fluid, passionate, infecting the audience and motivating the audience. Strength refers to the body language connotation embodied by athletes in various dynamic and static actions. It is reflected in the athlete's self-confidence and the degree of action, the appeal, coordination, rhythm and the connotation of action. Twenty-five percent of the respondents agreed with the temperament of the multi-blood type, believing that the athletes of the temperament type could activate the performance atmosphere and devote themselves to the competition. Apart from its basic forms of sport, it is difficult for athletes to have a good performance if they want to create a beautiful feeling and a passionate atmosphere. Beautiful action refers to the unity of internal beauty and external beauty, which includes the cultivation of self-quality and the beautiful emotion from the heart. Ten percent of the respondents agreed with the type of mucus temperament, believing that the athletes of this temperament performed steadily in the competition and had rich connotations; for the athletes of the type of euphoria, they were unanimously considered not suitable for the high-level training of aerobics.

Similar to temperament, athletes' personality plays an equally important role in the performance level. How to embody the connotation of the action in the whole set of movements, and how to make the audience feel the emotion that the athletes want to express. All these require athletes to communicate with referees and spectators with full confidence, enthusiasm and expression. The personal charm of athletes is an important means to infect spectators. External beauty includes the unity of walking, standing, posture, internal and external language changes, etc. 81% of the respondents believed that self-confidence had a great influence on the athletes' performance. It is considered that 60% of the people surveyed have a greater influence on the appeal of action. The athlete's character is the relatively stable psychological characteristics of the athlete. It reflects the athlete's attitude towards the surrounding environment, the aerobics program itself, the other athletes and the attitude towards himself. It is the sum of the characteristics that affect the athlete's overall behavior. However, the strength and weakness of expressiveness, there are objective factors, there are also subjective factors, which have a certain relationship with the athlete's psychological quality, temperament personality, music choice and many other factors. Mobilization should be good at excavating beauty, understanding beauty, appreciating beauty, and commenting on beauty. Therefore, the appeal is the key to the game. It is timely to master the key factors such as your own demeanor, charm, and spirit, and fully express youthful vitality, which can achieve unexpected results.

## **3. Cultivation of aerobics athletes' expressiveness**

The traditional material selection only pays attention to appearance, that is, body and appearance. In fact, in addition to appearance, attention should also be paid to the inner temperament, personality characteristics and hobbies of aerobics athletes. Strength training can be performed with instrument-assisted exercises to train the combination of instruments for imperfect parts of the body. In the consultation with the experts, all the experts believe that dance has more expressive power than aerobics. The athletes integrate their expressions into aerobics through the understanding and reference of dance. Can make aerobics more expressive. There are two methods to develop flexibility: passive method and active method. They can be used in a comprehensive way. The training parts can focus on shoulders, chest and legs. Coordination quality can be practiced through

some characteristic combinations and routines. In practice, we should pay attention to the difficulty from low to high, the intensity from small to large, and the content from simple to complex. Athletes should choose according to their actual level, complete their movements in the prescribed rhythm, and cooperate with the response music. For aerobics, on the one hand, athletes have a stable and specialized interest in this project, which can arouse the enthusiasm and firmness of training and competition, and thus desire to master technology faster and better, and improve the level of competition.

The training of expressiveness has been paid more and more attention. This desire can lead to increased excitability in the cerebral cortex, which is conducive to the performance of athletes. Special coordination exercises with music accompaniment can improve the functional level of athletes' central nervous system. It can make the excitation and inhibition of cortical nerve process alternate reasonably, improve the intensity, balance and flexibility of nerve, and enhance the ability of athletes to control muscle. As a result, the movement is more rhythmic and aesthetic, so that athletes can freely express their inner feelings through action. In the training, you can practice through modern dance, jazz dance, ballet, Latin dance and other dances. For example, the cheerful and lively team members can create a lively and dynamic and unrestrained action routine, letting their personality be released in performance, showing a warm and wild expression. These directly or indirectly affect the performance of expression. From the perspective of sports psychology, the gap in temperament is an essential feature of athletes' sports competition. Finally, different personality expression trainings are carried out in different aerobics routines. According to different styles of music and movements, the athletes use different personal expressions to match the movements of each musical passage, so that the individual expressions are in different performances. Play naturally.

#### **4. Conclusions**

Expressiveness refers to the athlete's own emotion, understanding, observation, imagination, and self-confidence, transforming the meaning of action and music into his own inner emotion. An ability to attract and infect a viewer by continuously expressing external forms such as body posture, technical movements, and facial expressions. The temperament is characterized by bile quality, multi-blood quality and character stability, optimistic and decisive, brave aerobics athletes can express themselves in the competition, which is conducive to the continuous improvement of their expressive power. Aerobics belongs to performing events, so we should pay more attention to the requirements of artistic expression. We should draw more advantages from other forms of artistic expression to make aerobics more ornamental and competitive. Some of them are not in good shape and can be trained by Ballet and other related means. What we should pay attention to is the combination of movement, music and expression. Especially, the key is the understanding of movement and music of athletes, and the potential of Aerobics itself, so as to achieve the best performance. Performance ability is a demonstration of comprehensive ability. Its cultivation is one of the purposes that can run through the whole process of Aerobics training, and it is also an important factor to measure the training effect. To sum up, based on information technology, the virtual teaching system of aerobics can be optimized and played a positive role, which can promote the application of information technology in the actual design of virtual teaching system of aerobics.

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