

Observation of the technical normative teaching practice of soaring movements in martial arts long fist routines

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Abstract: The soaring action is the core technical link to measure the level and difficulty level of martial arts long fist routines. Its technical standardization directly affects the completion quality, artistic expression and competition results of the action. This paper sorts out the technical normative requirements of typical soaring movements (such as flying feet, whirlwind feet, and swinging lotuses) in the long fist routine through literature, teaching observation and logical analysis, and goes deep into the front line of teaching practice, observing and analyzing the common technical errors and their causes in current teaching. The study believes that normative teaching should be based on a deep understanding of the principles of movement biomechanics, follow the law of the technical chain of “run-up-jump-take-off-landing”, and adopt a teaching method that combines decomposition and completeness, and pays equal attention to assistance and protection. At the same time, in view of the common problems of insufficient take-off, loose air posture, and unstable landing, teaching improvement strategies such as strengthening special quality, optimizing teaching steps, and using modern feedback methods are proposed, in order to provide theoretical reference and practical basis for improving the teaching quality and training effect of long fist soaring action.

Keywords: Long Fist; Soaring Action; Technical Specifications; Teaching Practice; Sports Biomechanics

1 Introduction

Wushu Changquan is known for its posture stretch, strength and smoothness, distinct rhythm, and multiple jumps. Among them, the soaring jump is not only the key to the difficulty of the routine (group A) score, but also the highlight that reflects the physical fitness, technical level and mental outlook of the athletes^[1]. With the continuous development and improvement of competitive martial arts rules, the requirements for the height, float, success rate of hitting, and landing stability of the take-off action are becoming increasingly stringent^[2]. Therefore, how to teach the soaring action technique scientifically and standardly in teaching, so that students can complete the movements with high quality, has become an important topic in martial arts teaching and training.

Although the soaring action is very important in the routine, in daily teaching practice, due to the difference in students' physical fitness, vague technical concepts, improper teaching methods, etc., there are generally non-standard movements and low quality of completion. This not only affects the overall practice effect of the routine, but also increases the risk of sports injuries^[3]. Based on the observation of teaching practice, combined with the theory of sports biomechanics and the research results of previous people, this paper conducts an in-depth discussion on the standardized teaching of long fist soaring action, aiming to summarize effective teaching experience, discover and solve practical problems, and promote the scientific and standardized process of martial arts teaching.

2 Research objects and methods

2.1 Research objects

The research object of this study is the teaching practice focused on the technical standardization of typical aerial movements (Flying Kick, Whirlwind Kick, Lotus Kick) in Wushu Changquan routines.

2.2 Research methods

2.2.1 Literature method

Through the China National Knowledge Infrastructure (CNKI) database, the keywords “long fist”, “soaring action”, “technical analysis” and “teaching training” were searched, and relevant journal papers and dissertations in the past ten years were consulted, and the techni-

cal principles, teaching methods and common problems of the soaring action were systematically sorted out, which provided solid theoretical support for this study.

2.2.2 Teaching observation method

In-depth martial arts general course and sports team training course of a sports college for a semester of teaching practice observation, focusing on recording the technical performance of students in each link (run-up, stepping and jumping, aerial posture, landing) when learning the above-mentioned take-up actions, especially the common wrong movements.

2.2.3 Logical analysis method

summarizes, analyzes and synthesizes the observed and collected information, logically derives the causes of technical errors from the perspective of biomechanics and motor skills formation laws, and puts forward corresponding teaching countermeasures.

3 Observation and analysis of technical specifications and teaching practice of long fist soaring action

3.1 Key points of technical specifications for the core take-off action

3.1.1 Technical specifications for take-off and flying feet Requirements: coherent run-up steps, full pedaling and extension of the last step of the step-up leg, swinging legs to swing up quickly, when the body is close to the highest point after takeoff, the top of the foot of the high-five palm should be accurate and loud, the upper body should be slightly forward, standing up, and lifting the air. When landing, the front foot transitions, and the knee is bent for cushioning ^[4].

3.1.2 Technical specification requirements for whirlwind feet: At the moment of stepping and jumping, the upper body cooperates and twists, swings the leg inside, and the other leg swings in the air in a whipping style, and the body rotates more than 360° around the sagittal axis. The whole action requires rapid turning, high floating legs, and accurate hitting. When landing, the body faces the direction of take-off and remains stable ^[5].

3.1.3 Technical specification requirements for the soaring lotus: This is a compound soaring action that combines turning and swinging legs. After stepping and jumping, the body is lifted and rotated more than 180°, one leg is inside, and the other leg is swinging outward, and it is fanned into a fan. The movement requires the rotation and leg technique to be coordinated, and the body has a “sense of soaring” in the air, and the landing is light and stable ^[6].

3.2 Common Technical Errors Observed in Teaching Practice

Through teaching observations, the following common issues have been identified among students during the learning process:

1. Run-up and take-off link: The last step of the run-up is too big or too small, resulting in weakness in stepping and jumping; The stepping and jumping legs are not fully extended, and the knee and ankle joints are too flexed, which cannot effectively convert the horizontal speed into vertical jumping force; The swing arm and swing leg are not coordinated and fail to form a joint force ^[7].

2. Aerial posture link: Insufficient core strength, resulting in loose body in the air, collapsed waist, hip sitting and other phenomena; Turning movements (such as whirlwind feet) raise their heads too early or too late, resulting in skewed rotation axis and slow rotation; The flexibility and speed of the striking leg are not sufficient, and the striking is inaccurate or cannot be completed.

3. Landing stability: Lack of concentration when landing, poor control of the body's center of gravity; The knee joint is not cushioned or over-cushioned at the moment of landing, resulting in body shaking, falling and even knee joint injury ^[3].

4 Discussion of normative teaching strategies based on observation

In view of the above-mentioned practical problems, normative teaching should be strengthened from the following aspects:

4.1 Building a Solid Foundation and Enhancing Sport-Specific Physical Conditioning

The quality of aerial movement execution is highly dependent on lower limb explosive power, core strength (abdominal and lumbar region), hip flexibility, and coordination. In the initial stages of instruction, it is imperative to incorporate a substantial volume of targeted

auxiliary exercises, such as:

- Jumping ability: continuous single-legged jumps, stride jumps, deep jump exercises, etc.
- Core strength: Supine leg raises, biceps, planks, etc.
- Flexibility and coordination: front and side leg presses, inner and outer swing leg exercises, as well as imitation arm swing jump exercises in situ.

4.2 Optimizing the Technical Learning Process Through Part-Whole Training

This method adheres to the principles of motor skill acquisition by employing a “part-whole” teaching approach. Taking the Whirlwind Kick (Xuanfeng Jiao) as an example, the technique can be broken down into the following progressive steps:

Step 1: Practice in place or in the upper step to solve the problem of leg method route and ringing.

Step 2: Turn around and practice 360° jumping on the spot to establish a sense of time and space when turning your body.

Step 3: Step up and jump to practice turning the body (without adding leg method) to experience the cooperation between stepping and turning the body.

Step 4: Complete the full action with protection and help, gradually transitioning to independent completion^[8]. This method can effectively reduce the difficulty of learning and help students establish correct movement concepts.

4.3 Utilizing Technology-Enhanced Feedback in Modern Teaching

Use feedback and make full use of video feedback technology with the help of modern teaching methods. Record students' movements and slow down and compare them with the standard movements of outstanding athletes, so that students can intuitively see the gaps in their own skills, such as stepping and jumping angles, body posture, etc., which is one of the most effective means to correct wrong movements^[9].

4.4 Implementing Safety Measures for Injury Prevention

Strengthen protection and prevent sports injuries Especially in the early stage of learning the rotation of the body, teachers should personally or arrange for students to provide protection and help, such as standing on the side of the student's turning direction and gently pushing his waist and back when he takes off to help him complete the rotation and land stably. This not only prevents sports injuries, but also enhances students' confidence in completing the movement.

5 Conclusions and recommendations

5.1 Conclusion

1. The technical standardization of the long fist soaring action is reflected in the four aspects of “high, floating, stable and accurate”, and its completion is a system project closely connected by the four links of run-up, stepping and jumping, take-off and landing.

2. In teaching practice, students' technical errors are mainly concentrated in three links: low take-off efficiency, poor air attitude control and unstable landing, which are rooted in insufficient physical fitness, unclear technical concepts and single teaching methods.

3. Normative teaching must be based on scientific analysis, and a multi-pronged approach can effectively improve the teaching effect by strengthening special quality, optimizing and decomposing the teaching process, using video feedback and strengthening protection and help.

5.2 Recommendations

1. For teachers, they should deeply study the biomechanical principles of soaring actions and improve their ability to detect and correct wrong movements.

2. For students, they should pay attention to the training of basic physical fitness, patiently complete each decomposition exercise, and gradually consolidate the correct movement form.

3. For teaching units, high-speed cameras, force plates and other equipment can be actively introduced to carry out more refined tech-

nical diagnosis and promote the development of martial arts teaching in the direction of digitalization and science.

References

- [1] Wang Zhihui. Research on the characteristics of C-level jumping difficulty movement training in competitive martial arts routines[J]. Journal of Beijing Sport University, 2013
- [2] Chen Jianmin, Liu Tongwei. The development trend of competitive long boxing technology from the evolution of competition rules[J]. Journal of Shanghai Institute of Sport, 2009
- [3] Zhao Guangsheng, Liu Jing. Research on the Causes and Prevention of Sports Injuries for Students in Wushu Special Courses in Colleges and Universities: A Case Study of Jumping Movement Teaching[J]. Journal of Wuhan Institute of Physical Education, 2018
- [4] Zhang Jisheng, Lei Bin. Sports biomechanical analysis of “flying feet” technique in martial arts routines[J]. Journal of Physical Education, 2010
- [5] Ding Baoyu, Jing Jiqun. Biomechanical analysis of 720° action take-off technique of whirlwind foot of outstanding martial arts athletes[J]. Journal of Tianjin Institute of Physical Education, 2011
- [6] Gao Liang. Research on the technical characteristics of martial arts routine jumping difficulty action “Soaring Lotus 360°”[J]. China Sports Science and Technology, 2015
- [7] Li Yingkui, Yang Liang. Research on the common characteristics of martial arts jumping difficult action run-up stepping techniques[J]. Journal of Xi'an Institute of Physical Education, 2017
- [8] Cai Zhonglin, Liu Wenwu. Research on the Application of Decomposition Teaching Method in the Teaching of Martial Arts Soaring Movements[J]. Sports Culture Guide, 2014
- [9] Wang Sen, Li Shiming. Experimental Research on Video Feedback in the Teaching of Martial Arts Routines and Soaring Movements[J]. Journal of Shandong Institute of Physical Education, 2016