

Analysis on the Technical Requirements and Training of Wushu Sanda

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Abstract: Sanshou is a sport that demonstrates the actual technical movements of attack and defense. It is also one of the confrontational fighting sports. Practical attack and defense include bare-handed and weapon-based fighting. Bare-handed fighting includes Sanshou, which is what we usually call fighting in a ring, and Push Hands, which is the push hands of Tai Chi, and weapon-based fighting. Sanda sports are actual combat exercises of offense and defense that are conducted under certain conditions and with certain competition rules. That is to say, it is a step higher than the original sparring routines and is a practical exercise. Technical training is the core content of the entire Sanda training. The level of technical skills determines the quality of sports performance. Good physical fitness is the basis for mastering and improving Sanda skills. Only when athletes master the skills can they effectively give full play to their physical training level. The two are mutually dependent. Sanda basic training refers to the training of striking, throwing, attacking and defending movements. The purpose is to enable athletes to master these movements proficiently and be able to use them flexibly and freely in actual combat.

Keywords: Wushu Sanda, technical requirements, Sanda training, technical training.

1. Introduction

The flexible and agile footwork of Sanda is not only the key to adjusting the center of gravity and maintaining body balance, but also the basis for occupying a favorable position and exerting the best offensive force in attack and defense. The speed of footwork and the distance of movement directly affect the effect of attack and defense, so it is particularly important to master, learn and practice the technique of footwork.

The footwork should be flexible, which means that the movement and change of footwork should be flexible and agile. Sanda is flexible and changeable, easy and free, and the virtual and real are changed, so that the opponent cannot figure out the law of the change of the center of gravity, which makes it difficult for the opponent to judge. Sanda footwork should be flexible, leg strength is the foundation, and the elasticity of the knee and ankle joints should be good. When standing in the ready position, the distance between the two feet should not be too wide or too narrow, and the center of gravity of the body should not be too low. In actual combat, the two feet should always be in motion, and avoid being still.

The footwork should be fast, which refers to the speed of footwork movement. When fighting, both athletes are in a state of confrontation and keep a certain distance from each other. If either party wants to launch an attack, they must use fast footwork to approach the opponent and use methods within the effective distance, so that the attack can be effective. Similarly, when the opponent attacks or counterattacks, they must be able to withdraw, retreat or dodge with fast footwork, so that the defense can be successful.

The footwork should be stable, which refers to the stability of the footwork movement. It fully demonstrates the importance of footwork stability in actual combat. However, in the actual combat process, boxers will inevitably have a single-leg support, forward center of gravity or backward body state. First of all, when moving footwork, boxers should

try to avoid crossing their legs and keep their bodies in a mechanically stable state as much as possible; Secondly, when boxers use the action, the vertical projection of the center of gravity downward should be placed between the two legs as much as possible, or should not exceed the support surface too much. For example, some athletes use too much force when punching, causing the center of gravity to move too far forward. If the opponent attacks at this time, the front leg is likely to be unbalanced. In addition, some athletes excessively pursue height when using leg techniques, causing the supporting foot to stand unsteadily. If the opponent uses the lifting, supporting and other techniques, they will fall to the ground. These are all manifestations of unstable footwork.

The footwork must be accurate, which refers to the accuracy of the footwork movement. Accurate footwork movement can win time and create favorable opportunities for attack, defense or defensive counterattack, and reduce the blindness of the action. If the boxer's footwork is not in place when attacking, it will not produce the best effect, and it will also affect the second attack and active defense; if the footwork is not in place when defending, it will lead to being hit or not conducive to counterattack. Grasping the accuracy of footwork movement mainly depends on the athlete's ability to sense time and space. The acquisition of this ability depends on long-term training practice and continuous exploration and summary.

2. Sanda Footwork Training

Footwork is the method of moving the body forward, backward, left and right in Sanda fighting. Flexible and agile footwork is not only the key to adjusting the center of gravity to maintain body balance, but also the basic footwork to occupy a favorable position and exert the best offensive force in offense and defense. Careful study and practice are important links to improve actual combat ability. The following footwork is based on the left actual combat posture as an example.

Advance: Lift the left foot, move forward, and quickly push the ground with the right foot, and follow the same distance [1].

Retreat: Take a step back with the right foot, push the ground with the left foot, and quickly retreat the same distance.

Side step: step sideways to the left with the left foot, push the inside of the right ankle against the ground, and quickly follow the same distance sideways to the left.

Inside step: twist the front of the left foot in place or step to the left, then lean the body to the left, quickly follow the right foot to the left front, and turn the body about 90 degrees to the right.

Cover step: step forward with the right foot in front of the left foot, toes outward, legs crossed, then step forward with the left foot, and return to the actual combat style.

Insert step: step forward with the right foot behind the left foot, heel off the ground, legs slightly crossed, then step forward with the left foot, and return to the actual combat style.

Step: push the right foot against the ground and move closer to the left foot, while the left foot bends and lifts up to step forward, and return to the actual combat style.

Strike step: jump up with both feet, then land with the left foot, and then lift the right foot and step down with the knee raised later, and return to the actual combat style.

Changing steps: The front foot and the back foot push the ground at the same time and exchange back and forth. At the same time, the two fists also exchange back and forth to form a right combat style.

Individual practice of footwork. After learning a footwork, boxers must practice it repeatedly to find the key points, become familiar with the technique and gradually transition from individual practice to continuous practice. Comprehensive practice of various footwork. After becoming proficient in individual practice of footwork, boxers can combine several footworks for comprehensive practice.

Combined with signal exercises, the coach uses the direction of the palm and back of the palm or a certain signal, and requires the practitioner to make the corresponding steps. This kind of exercise can not only consolidate the footwork technique, but also improve the reaction ability. Two people cooperate in the exercise, and one party is required to use a variety of steps, move and retreat, etc., while the other party makes corresponding moves to keep the distance between the two parties as constant as possible [2].

Practice combined with offensive and defensive movements: 1. Practice footwork in combination with various offensive and defensive movements to improve overall coordination and cooperation to meet the needs of actual combat; 2. Paired practice, requiring one party to attack with a single move or a combination of moves, while the other party moves to get rid of it and looks for opportunities to counterattack, to improve the effectiveness of footwork.

3. Sanda Technical Training

There are five commonly used boxing techniques in Sanda: straight punch, swing punch, hook punch, chop punch, and whip punch. In actual combat, it is fast and flexible, and can hit the opponent at the shortest distance and the fastest speed. Boxing is beneficial for combined training and can be used in conjunction with other techniques. If mastered well and used skillfully, it can pose a great threat to the opponent.



Figure 1. Sanda boxing moves

Straight punch: Take the left straight punch as an example. Stand in a left position, push the ground with your right foot, move the center of gravity slightly to your left foot, turn your waist and shoulders, punch forward with your left fist, and bring the force to the fist. Then, naturally retract your right fist to the front of your chin. Actual combat example: Use left and right straight punches to attack the opponent's head. When the opponent attacks with a side kick, use your left hand to defend, and at the same time, use your right straight punch to counterattack the opponent's head.

Swinging punch: Take the left swinging punch as an example. Stand in a left position, twist the upper body slightly to the right, and raise the left arm slightly. The forearm rotates inward and strikes forward in an arc, with the force reaching the fist. The angle between the upper and lower arms is about 130 degrees, and the right fist is naturally retracted in front of the chin. Actual combat example: feint with the left fist, and then use the right swinging punch to attack the opponent's head. When the opponent kicks with the right leg to attack my middle, the left hand hangs on defense, and then uses the right swinging punch to counterattack the opponent's head.

Hook: Take the left uppercut as an example. Stand in a left position, lean your upper body slightly to the left, lower your center of gravity slightly, lower your left fist slightly, then push off the ground with your left foot, turn your upper body to the right, push your abdomen forward and send your left hip forward, and hook your left fist from bottom to top. The force reaches the fist, and the angle between the upper and lower arms is about 90 degrees. The right fist naturally retracts in front of the chin. Actual combat example: Fake move, suddenly move your upper body closer to the opponent and hit his chin with an uppercut. When the opponent throws you forward, quickly retreat and hit his head with a left hook.

Whip punch: Take the right whip punch as an example. Stand in the left position, with the front of the left foot as the axis, turn the body backward 180 degrees, step the right foot behind the left leg, and continue to turn the body to the right. At the same time, use the waist to drive the right arm to whip horizontally to the right, and the force reaches the fist wheel. The left fist naturally retracts in front of the chin. Actual combat example: pretend to attack with a left straight punch, and then suddenly use the right whip punch to attack the opponent's head. When the opponent uses the left spring kick to attack my middle, the left hand hangs on the defense and counterattacks the head with the right whip punch.



Figure 2. Sanda kick techniques

Leg techniques are rich in content and are divided into three parts: flexion and extension, straight swing, and sweeping and turning. In fighting, leg techniques are flexible and maneuverable, with many variations, long attack distance, strong force, concealment, and prominent attack parts. When using leg techniques to attack, it is required to be fast, powerful, and accurate in hitting points [3].

Side kick: Take the left kick as an example. Stand in the left position, lean the upper body slightly to the right, shift the center of gravity backward, bend the left knee and extend the hip, naturally fold the calf and thigh, straighten the instep, then bend and stretch, and drive the calf to the right and front, with the force reaching the instep. Actual combat example: Feint the left kick to attack the opponent's lower body, then kick the right kick to hit the opponent's upper body.

Forward kick: Take the left forward kick as an example, stand in the left position, shift the center of gravity slightly, bend the left knee and lift it, bend the shoulders forward, hook the toes, and then kick forward from the heel, with the force reaching the heel. Actual combat example: Use the forward kick to attack the opponent's upper body, when the opponent uses the side kick to attack, suddenly use the right forward kick to attack the upper body first [4].

Side kick: Take the left kick as an example: stand in the left position, shift the center of gravity backward, turn the upper body slightly to the right, bend the left knee and lift it, hook the toes, then extend the hip, make the sole of the foot face the attack direction, quickly bend and stretch it, kick forward, and reach the heel. Actual combat example: kick with the left side, pretend to attack the opponent's lower body, then use the city kick to actually attack the opponent's upper body, pretend to attack the opponent's lower body with the left spring leg, then turn around and kick to attack the opponent's upper body.

Back Sweep: bend forward, bend the left knee and squat forward, use the front foot as the axis, turn to the right and back to drive the right leg to sweep the ground in an arc to the left and back, and the force reaches the heel. Actual combat example: when the opponent attacks my upper body with the left spring kick, after the partner blocks the defense, immediately use the back sweep kick to attack the opponent's supporting leg.

Sweep kick: Take the right sweep kick as an example, stand in the left position, shift the center of gravity to the left foot, then turn the upper body 360 degrees to the right and back, drive the right leg, and sweep the straight leg from back to front in an arc, with the force reaching the instep. Actual combat example: When the opponent uses the right spring kick to attack my upper body, the partner defends and then uses the right rear sweep kick to attack the enemy's upper

body [5].

Turn and sweep the leg: Take the right turn and sweep the leg as an example, stand in the left position, shift the center of gravity to the left foot, then turn the upper body 360 degrees to the right, drive the right leg to sweep the arc from back to front, stretch the foot flat, and reach the sole of the foot. Actual combat example: Use the right spring leg to pretend to attack the opponent's lower body, and then use the left turn and sweep the leg to attack his upper body.

Leg interception: Take the right leg interception as an example, stand in the left position, shift the center of gravity to the left leg, turn the upper body slightly to the left, and at the same time swing right and lift up, hook the toes and turn them outward, and then intercept forward and downward. Actual combat example: When the opponent uses the leg-lifting method to attack, kick first to intercept his calf [6].



Figure 3. Sanda wrestling techniques

Source: www.shaolintangou.com/

Throwing is a method of using clever techniques to knock down the opponent in competitive fighting. In fighting, throwing must be done quickly and decisively because it is a competitive fight. Therefore, boxers cannot leave the opponent a chance to breathe, which is an effective measure to protect themselves.

Throwing forward with both legs: When holding the opponent's legs and being pressed down by the opponent, quickly bend the elbows, pull back with both hands, and use the left shoulder to push the opponent's hips and abdomen forward to throw the opponent down.

Throwing with legs hugging the chest: quickly step forward with the left foot, bend the knees and waist, hug the opponent's legs from the outside to the inside with both hands, push the left hand forward to the opponent's crotch, then step forward with the right foot, push the waist and legs up and raise the head to throw the opponent backward.

Throwing with one leg hugging: When hugging the opponent's single leg, the opponent presses down to defend and quickly bends the right elbow, pulls the opponent's calf backward, and pushes the left shoulder down to throw the opponent's leg [7].

With one leg hugging, after hugging the opponent's front leg, quickly extend the left hand forward to hug the opponent's rear supporting leg, and simultaneously use the right hand to pull the left hand backward to push the opponent forward and pull it down.

Neck clamping and back throw: Bend your right arm and clamp the opponent's neck, turn your back to the opponent, bend your knees and use your right hip to press against the opponent's front body, then squat deeply with your legs down, bend your waist and lower your head, carry the opponent and throw him down.

Waist clamping and back throw: Bend your right arm and hold the opponent's waist, turn your back to the opponent, bend your knees, press against the opponent's front body, then squat deeply with your legs down, bend your waist and lower your head, carry the opponent and throw him down.

Leg-catching turning and pressing throw: When the opponent kicks with the right leg, take a left step. Hold the knee arch with your left hand, grab the lower end of the opponent's calf with your right hand, then withdraw your right step, bend your upper body forward and turn right, and at the same time, press inward with your right hand to throw him down.

Leg-catching and leg-separating throw: When the opponent kicks with the right side, use the cheekbones to grab the arch of the opponent, grab the lower end of the calf with the left hand, then step on the right foot, and after the opponent's left leg, turn to the right, and separate the right leg from the supporting leg to turn the opponent upside down.

Leg-catching and leg-hooking throw: When the opponent kicks with the right side, grab the calf with the left hand, break through the opponent's right shoulder with the wrist, press down on the neck, and at the same time raise the left hand, kick the supporting leg upward and forward with the right foot to throw the opponent down.

Leg-catching and leg-swiping throw: When the opponent kicks with the right side, grab the opponent's right foot with both hands, pull the right foot to the left with both hands and then swing it to the upper right to throw it out [8].

Leg-catching and leg-lifting throw: When the opponent kicks with the right leg, grab the lower end of the calf with both hands, then bend the arm and lift it. After holding the foot with both hands, step up the right step at the same time, and push upward to throw it down.

Cut and throw: The left arm breaks through the opponent's right shoulder, and presses forward and downward, cutting and pressing the opponent to death, and knocking him down.

Defense is a method that can control and strike the opponent's attack, protect yourself, and give the correct position for counterattack. The ultimate goal is to provide defense and reaction. Correcting defense accurately can not only protect yourself but also create better conditions for unstable attacks.

Partner defense: Take the left racket as an example to block, with the left palm facing inward, and the racket facing inward and slightly turning to the right.

Block defense: bend the left arm to block the head or shoulder on the same side.

Inner copy defense: bend the left and right arms slightly and put them outward, close to the front of the abdomen, with the palm facing up, and bend the left and right arms at the same time, close to the chest, and stand upright, with the palm facing outward.

Outer copy defense: bend the left arm outward, and the upper arm is close to the ribs.

Knee-lift defense: move the center of gravity to the right, bend the front leg, support the back leg, and keep the upper body posture stable.

Intercept defense: when the opponent is ready to attack, use the hand to intercept the leg to block the opponent's attack. No contact defense.

Backward dodge defense: move the center of gravity backward, and dodge with the upper body slightly backward [9].

Sidestep defense: Dodge to the left or right with the upper

body or use left and right steps to defend.

Dive defense: bend your knees to lower your center of gravity, lower your head and shrink your neck, and use your hands to protect your head.

Jump defense: Push the ground with both feet to make the body jump upward.

4. Sanda Technical Training



Figure 4. Sanda technical training

Practice on the spot: Use the practice on the spot method to focus on the essentials, and constantly figure out the line sequence of the action, the force point, and the body posture. When practicing, you should be naturally relaxed. Boxers are not required to be fast or use excessive force. Complex movements can be broken down and practiced from slow to fast, gradually mastering the correct method of the movement and constantly improving the quality of the movement.

Comprehensive footwork practice: After boxers have practiced on the spot and have basically mastered the movement standards, they should combine corresponding footwork practice according to the needs of actual combat, improve the attack distance, and the mobility of martial arts to closely link the technology with actual combat, and gradually achieve the use of technology to lay a solid foundation for clear technical movements, timely coordination, and objective offensive and defensive confrontation situations.

Hypothetical practice: A boxer imagines the opponent's offensive and defensive actions or the state he is in and then performs the corresponding offensive or defensive counterattack. Doing hypothetical bare-handed practice, boxers have an immersive combat state facing the opponent and can improve their reaction ability, movement speed, cultivate fighting will, and master the specific fighting methods of various battles.

Fixed target practice: Fixed target practice is a practice that uses chest targets, hand and foot targets, sandbags and other auxiliary equipment as targets. It is an important means to improve technical movements and increase movement speed and strength. It requires accurate, fast and full force to hit the target [10].

Target practice: Target practice is a practice method in which the coach or a companion holds a small target and continuously changes the angle, position, and direction. It requires the practitioner to react quickly and flexibly and use a variety of techniques to hit.

Through practice, boxers can effectively improve the quality of their offensive and defensive counterattacks, and improve their offensive speed, accuracy, distance sense,

reaction ability, and adaptability. It can establish stable conditioned reflex actions and gradually achieve automation.

Attack and defense exercises. Conditional attack and defense stipulate that one party uses boxing to attack the other party or kicks to attack, and the other party uses leg-catching and throwing, etc.

Attack and defense exercises have conditions: initial strong and effective training, improve certain abilities of the practitioners, and the ability to use certain methods. Any attack and defense such as the specified strength, speed, or competition with higher-level athletes, used for actual combat techniques, can effectively improve the practitioner's technical level physical fitness and fighting spirit and is also an effective measure to summarize and accumulate actual combat experience.

5. Sanda Combat Training

The actual combat posture is usually called the preparatory posture or fighting posture, which is the pre-combat exercise posture adopted before fighting. It not only puts the body in a strong state, but also has the best quick reaction ability, is conducive to fast movement to launch attack and defense, and has a small exposed surface, which can effectively protect one's vital parts.



Figure 5. Sanda combat skills
Source: www.ports.people.com.cn/

The combat stance is divided into the left combat stance and the right combat stance. Let's take the left combat stance as an example: Stand with your feet open, with the front heel and the back toe about shoulder-width apart. Place the entire sole of your left foot on the ground, lift your right heel slightly, place the front sole of your foot on the ground, bend your knees slightly, and buckle them naturally. Move your body's center of gravity to the right, hold your chest, tighten your abdomen, and twist your hips. Bend your left arm inwards by about 90 degrees, with the fist parallel to the tip of your nose. Bend your right arm inwards by about 45 degrees, place your fist in front of your neck, let your elbows naturally hang down and slightly close inwards, tuck your chin inwards, and look at the opponent's upper body.

Combination strikes are the use of two or more actions to attack the opponent continuously. Combos are divided into six types: boxing strikes, leg strikes, boxing and leg strikes, boxing and throwing strikes, leg throwing strikes, and boxing and leg throwing strikes. You can attack continuously with a single move, or you can hit with multiple moves in a row.

Due to the diversity of technical moves, there are many different ways to strike, but the combination is not blind. You must combine and match according to the rationality of the action conversion and the suction and timeliness used in actual combat to achieve the purpose of a heavy blow. When using it, boxers should pay attention to the combination of true and false, and the connection between the real and the fake, so that the opponent can be hit at multiple points up, down, left, and right, and it is hard to defend. In addition, boxers should pay attention to the connection between actions. Generally speaking, the structure of the first level is the best force-generating posture of the second level.

6. Conclusion

Sanda's action skills include Jeet Kune Do defense, dodge defense, diving defense, etc. Effective defense can help you counterattack quickly when attacked by your opponent, dodge defense can help you better protect yourself when attacked by your opponent, and diving defense can help you better prevent being hit when attacked continuously by your opponent.

In short, Sanda's skills are practical applications, and different countermeasures need to be taken in different situations. Through continuous practice and practice, we can improve our Sanda skills and practical ability.

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