

Theoretical Research on Football Tackle Technique

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Abstract: Tackle is one of the more difficult techniques in football technology to learn, and it has a wide range of applications in high-level football players. This article analyzes the principle, classification, and usage scenarios of tackles through literature method, interview method, and case analysis, and draws the following conclusions: 1. The tackle technique is a sequential and sporty open skill, which is unstable. Sex, complexity and difficulty. 2. The number of tackles and the success rate are the highest in the backcourt, followed by midfields and the lowest in the frontcourt. The reason is that tackles are mostly defensive tackles in the game, and the backcourt is the area where defensive tasks are the most important. 3. It is reasonable to classify the offensive and defensive attributes of tackles by area.

Keywords: tackle, principle, classification, scenario analysis

1. Paraphrase

Tackles are a type of tackle in football. It is the technique of stealing, controlling the ball, passing the ball, and shooting by using the extension, sweep, kick, and hook movements of the foot or leg when falling to the ground. In England, where modern football originated, the English expression of tackle is "sliding tackle", "sliding" means sliding, and "tackle" means stealing. The stealing technique in sliding is the original meaning of tackle. Similarly, the expression for a tackle in French is "tacle gliss é", which basically matches the English expression. It can be seen that the original tackle is relatively simple, but after the long-term development of football, the tackle technology has evolved to a richer meaning.

2. Analysis of tackle technique

2.1 Principles of tackle technique

The technical principles of tackles in football are analyzed from the four aspects of sociology, psychology, biomechanics and biology, and the following principles are derived.

2.1.1 Principles of Sociology

Sports technology and aesthetics have a certain correlation. In a sense, "sports beauty" is technical beauty and movement beauty. Tackles in football can be understood as "violent aesthetics." Li Juan believes that football is a beautiful sport, but the beauty of football is often regarded as an external phenomenon [1]. Fans generally do not appreciate football from an aesthetic point of view, but passively watch the game. She believes that football has gone beyond aesthetics. It is integrated with social culture, and at the same time is a collection of emotions. The visual impact of this technical action of tackle is very strong, and the technique of tackle is very dangerous in the game and can easily cause injury. But it is such a technical action, full of violent beauty, which can often arouse the screams of the audience on the court.

2.1.2 Principles of Psychology

The physiological mechanism of exercise technology is currently highly concerned. The mental ability required for the learning and formation of sports technology, the formation and development of cognitive psychology, and the formation and application of representations all play an important role in learning and mastering sports technology. The tackle technique of football has a certain complexity. When an athlete decides whether to use a tackle for the ball, he or she will decide whether to perform the action after deliberation, and his action is affected by the stimulation of the environment. Should the ball be shoveled when defending? If this action is not performed, what should be done if the ball is scored, or if the action is performed, the ball is injured and the opponent's offensive player is injured? All are the mental activities of athletes. Nelick believes that in the process of football training, if athletes want to

promote their own level, they need to be able to form and have the accuracy of space perception, time perception and movement perception in the process, and they are in the process of development. In the process, accurate judgment is gradually formed [2]. In the practice of football tackle skills, possessing these cognitive abilities can form a good psychological quality.

2.1.3 Principles of Biomechanics

The biomechanical principles of exercise technology are body atrophy, joint angle, movement time of body and limb displacement, direction of force, stability of force and rate of change of dynamic force, etc. Regarding the biomechanical analysis of tackle technology, Jixi obtained the technical basis for the action through mechanical analysis in "Mechanics Analysis of Tackle Technology". According to the law of conservation of momentum $F \cdot \Delta t = m \cdot \Delta u$, the mass is constant, the speed changes according to changes in demand, and the amount of force the body can withstand is limited, so if the momentum becomes larger, If the magnitude of the force is unchanged, the action time Δt must be increased, and there must be sufficient time for the body to be buffered to prevent injury [3]. Therefore, in football tackles, the athlete's physical coordination is also a rigid indicator. If the athlete's body is not coordinated, the athletes are likely to fall over during tackles and cause injuries. Warm up before the football game to prevent injuries.

2.1.4 Principles of Biology

The physiological mechanism of exercise technology is the temporary neural connection of exercise conditioning, which is based on the movement of the cerebral cortex. The physiological nature of learning and mastering exercise techniques is to establish exercise conditioning. Tackle technique is a technical action involving multiple muscles of the body. The formation process of tackle technology is through generalization stage, differentiation stage, consolidation and automation stage. The tackle technique is also affected by the transfer of motor skills, sensory feedback, and the athlete's attention. In the process of skill practice, master its objective laws and choose reasonable and effective practice methods to accelerate the formation and improvement of sports skills [4].

2.2 Tackle Technical Classification

First of all, in Liu Zhigang and Yu Junguo's football game, the law of the application of tackle techniques and Liu Qingquan's analysis of the application of tackle techniques in offense. The classification of tackle techniques in the literature is divided into defensive tackles and defensive tackles. Offensive tackle. Defensive tackle: It refers to the tackle technique of grabbing back control of the ball from the opponent's feet in order to prevent the opponent's attack in the game [5]. It can be divided into at least three types: shovel grab, shovel off, and shovel control. Tackle is the purpose of simply destroying the opponent's offense, and the ball is shoveled from the opponent's feet; tackle is the main purpose of obstructing the opponent's pass and shooting, including the possession of the ball after the tackle; the tackle is to destroy the opponent Possession of the ball, while also controlling the ball for oneself for the dual purpose of tackle [6]. Offensive tackle: Offensive tackle refers to the technique of tackle for the purpose of offense. It is divided into shovel pass and shovel shot. A tackle is a tackle that uses a tackle to pass the ball to a team member in time; a tackle is a tackle for the purpose of shooting. But according to the classification of basic football skills, tackle is a tackle technique, while the tackles and tackles of offensive tackle techniques should be classified as passing techniques and shooting techniques. According to the definition of basic football skills, the core point of tackle should be to use feet or legs to control, pass or destroy or intercept the ball that is about to be received by the opponent. However, tackle passes and tackles are not meant to disrupt the movement of the ball. The tackle technique is divided into defensive and offensive. For example, the tackle is a technique in which the defensive player intercepts the ball when the offensive player holds the ball, and through the tackle technique, the offensive player passes the ball to his partner. But in defensive tackles, tackle passes can also be used. The tackle is clearly planned as an offensive technique from a conceptual point of view. Therefore, the tackle technique is divided into these categories according to offensiveness and defensiveness, which is rather vague. Therefore, it should be accurately classified as follows: it is good.

Secondly. In recent years of literature research, the technical moves of tackles are divided into three types: front, side, and back tackles according to the direction of action. However, according to the rules of football competition, back tackles are defined as fouls, and they cannot be chosen. Use, and the real back tackle does not exist. The so-called back tackle is actually a tackle from the left back and right back[7]. Therefore, the classification of tackle skills can be defined according to the classification of sports skills in Zhang Yingbo's "Motion Learning and Control": the deterministic classification of

environmental backgrounds can be divided into open sports skills. In a football game, it is a complex In the unpredictable and unpredictable sports environment, when and how to use tackle skills are complicated and changeable. It can be divided into sequence skills by means of action structure. The tackle technique is connected by a number of discrete actions. It belongs to a process without a clear boundary between the beginning and the end. Classified by the importance of sports and cognitive factors, it can be divided into motor skills. The execution of tackle technical actions is to complete the tackle and destruction of football through successful technical actions [8].

At last. There are 8 types of tackle techniques, but the main ones are front tackle, side tackle, one-foot tackle, one-foot outside tackle, and two-foot tackle. 1. Frontal tackle: move closer to the ball-handler, slightly bend the knee joints, and lower the center of gravity. When the ball-handler has not touched the ball after touching the ball, the ball-catcher slides his feet along the ground and shovels the ball, and then supports it with his hand. Roll to the side and get up as soon as possible. 2. Side tackle: The method of action is the same as that of the front tackle, to the effect that the offense has passed the defensive player with the ball, and the defensive player can only destroy the opponent's offense from behind the offense. 3. One-foot tackle on the outside of the instep: This method is generally used in the case of catching. When making a tackle, you must first seize the opportunity and make the tackle as soon as the ball leaves your foot. The knee on the same side of the supporting foot bends, the hip of the tackle foot is sent out in the direction of the ball, the body quickly leans back with the ground force, the waist and abdomen are fully extended, the outer edge of the tackle foot slides smoothly, calves, thighs, buttocks Raise funds to land, while supporting the ground with your hands. Turn around and stand after the tackle. 4. Tackling with the sole of the foot: Tackle the ball with the sole of the right foot. When the dribbler just pulls the ball out, first push the left leg, cross the right leg, bend the knee joint, slide out from the ground with the outside of the foot, use the sole of the foot Kick the ball out. Then the calves, thighs, buttocks, and upper body in turn land on the ground, and the body rolls forward with the tackle. 5. Two-foot tackle: This method can be used when facing and close to the opponent. At the moment when you see the opponent's step disorder or the ball has just left your foot, you should tackle the ball head-on. When you tackle the ball, you must lower your body's center of gravity, lean your upper body forward, kick forward with your feet, and then lean back. The heels, calves, thighs, buttocks, and back slide against the ground and slide in the direction of the ball. At the same time, support the ground with your hands to cushion the strength of the body.

3. Scenario analysis of tackle technique

Any technical action has its applicable scenarios. The tackle technique in the football game can be applied to the frontcourt, the midfield fight, the backcourt clearance and the destruction quick counterattack, etc.

3.1 Frontcourt press

The frontcourt is the area with the least use of tackle skills. Offensive players often face the dilemma of inferior numbers. Therefore, both the number of tackles and the success rate of tackles are the lowest. In one case, two or three forwards in formations such as 442, 433, 4231, etc. tackled the ball. Due to the small number of players, the gambling component was large and the success rate was low; the other was the use of tackle technology to reverse the ball after the attack failed. Robbery. In this situation, there are a large number of participants and a strong offensive organization, so the success rate is higher. Once the tackle is successful in the frontcourt, the reward is also considerable, and the striker is very likely to get the opportunity to face the goalkeeper. Therefore, some high-level teams such as Spain and Germany have achieved good results through the high pressure tactics of the frontcourt. The use of tackle skills is indispensable.

3.2 Midfield press

The midfield is the area where the two sides exchange ball control the most frequently, and it is also a battlefield for soldiers. "The midfielder wins the world", can attack and retreat, so the number of tackles in this area is much higher than the frontcourt. The most commonly used tackle techniques in this area are tackles and tackles for the purpose of disrupting the opponent's organization of offense or seizing the ball. The tackle technique is aimed at the short pass of the offensive team and cut off the opponent's passing route. In areas where the midfielders are denser, the tackle technique often has a good effect on the defender. The requirements for shoveling technology are very high, the movements are difficult to

master, and there are two risks. The tackle technique has a relatively high risk factor and is easy to foul or injure the opponent's player; the tackle action is generally a falling tackle. Once the opponent is resolved, the defensive position will be lost and the defensive pressure of teammates will increase. Therefore, shoveling around the midfield should be used as little as possible.

3.3 Backcourt clearance

The tackles used in the backcourt are generally divided into two types: inside and outside the penalty area. The purpose of the backcourt tackles is mostly to break the opponent's threat pass or dribble. In the face of threats, defenders often use falling tackles to intercept the running route of the ball; in the face of dribbling breakthroughs, they often use multiple tackles and interceptions. Defensive players often choose interceptions based on whether they are in the penalty area. The risk is high in the penalty area. Tackles can easily result in penalty kicks. If a tackle is violated outside the penalty area, the rule is a free kick, which depends on the defending player. Experience, weigh whether to use tackle skills. Even if the penalty is very strict, the backcourt still uses the most tackle skills. The defensive side will arrange intensive defense and use tackles to disrupt the opponent's offensive advancement. Even if the ball is not tackled, there will be teammates to defend. Therefore, in the game, the backcourt tackle skills are used more and the success rate is the highest.

3.4 Quick counterattack

In a fast counterattack, the winger is easy to play its speed advantage, making it difficult for the defender to defend, and the defender is afraid of the opponent's threatening ball, and often chooses to put the shovel in advance to kill the threat in the cradle. In fact, in this situation, not only defenders, but experienced players will use tackles to slow down the opponent's counterattacks. The purpose is not necessarily to get the ball, but to buy time for teammates to return to defense, so there are often situations where players fly and shovel to break the ball out of the sideline.

The number of tackles and the success rate of tackles are the highest in the backcourt, followed by midfields and the lowest in the frontcourt. The reason is that the technique of tackles is mostly used defensive tackles in the game. The backcourt is the area where the defensive tasks are the most important. Players often use tackles to destroy the opponent's offense when defending. In terms of offensive and defensive attributes. The frontcourt press is an offensive tackle; the backcourt and destruction quick counterattack are defensive tackles; the midfield fight is a combination of both.

4. Conclusion and discussion

Through in-depth theoretical research, this article draws the following conclusions: 1. The tackle technique is a sequential, sporty open skill, which is unstable, complex and difficult. 2. The number of tackles and the success rate are the highest in the backcourt, followed by midfields and the lowest in the frontcourt. The reason is that tackles are mostly defensive tackles in the game, and the backcourt is the area where defensive tasks are the most important. 3. It is reasonable to classify the offensive and defensive attributes of tackles by area.

After reading and sorting out the literature related to tackles and investigating, interviewing and researching, it was found that some of the classifications of tackle techniques were unreasonable. On the one hand, some documents classify tackle and tackle techniques as defensive tackle techniques, but in actual games these two types of techniques often appear on the offensive end. Likewise, the tackle technique is considered an offensive tackle, but this tackle technique also exists on the defensive end. Therefore, techniques such as tackle, tackle, and pass are not a single offensive or defensive technique, but a mixed one. On the other hand, the definition of the term "shovel control" is not clear enough. In the interview research, some interviewees expressed that they were unfamiliar with this concept and believed that the technology should be classified as shovel and grab technology. In view of the insufficient definition and classification of related tackle concepts in our country, the advanced Western football concepts are still worth learning.

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