# Application of Badminton Drop Ball Technology in Competition -- a Case Study of Lin Dan's Singles in 2017 "Sudirman Cup"

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ABSTRACT. Badminton technology from a single to today's comprehensive, efficient, fast and accurate characteristics of outstanding direction of development. This paper through the use of literature, video statistics method, mathematical statistics method to study and analyze the badminton lobbing technical movement. In the process of badminton movement, through the technical skills of the suspension ball and the classification of the suspension ball movement analysis and technical changes as well as when and how to use the suspension ball analysis. The speed and height of the lob are the basic criteria for a successful lob. The ball sticks the net and the drop point is very sharp, then coordinates other technology's use, pulls the crane to kill the crane and so on. This is one of the best ways to get offensive opportunities and even turn a passive ball into an active one. In the world badminton world high level of large international events, the technology of lobbing has become a must in the world today, is also a commonly used means of attack, even direct scoring and scoring to create conditions conducive to their own.

**KEYWORDS:** Lob technology; Game application; Technical characteristics, Technical and tactical

## 1. Introduction

In the development process of badminton, the drop ball has become the basic technology commonly used in badminton. No matter you are at a high level or a low level, you can use the drop ball to restrain the ball and mobilize the opponent, which is of great significance to turn the passive ball into the active ball. The hanging ball changes rapidly, so different levels of athletes used the way of hanging ball is not the same, this paper will comprehensively analyze the hanging ball technology. As the saying goes, the best defense is offense, attack is the best, although the lob technology does not like to kill the ball so violent, so comfortable, flat drive fast block if you have a surprise, but all of a sudden a lob in the game will let the opponent small-scale operations, and even do a second don't have a way to, start to attack to achieve the effect of direct score is a good way. Combined with the use of

other technologies, it is enough to make the opponent defenseless. In this paper, through the form of the backcourt drop ball, techniques and different circumstances of the use of the drop ball, further understand the principle and method of the drop ball.

## 2. The Form of Badminton Backcourt Lobbing

The lob that hits the other side USES finger wrist to send force to hit the body to cut the body to hit the ball to fall into the left and right sides of the other side net to be in neutral, this is called lob. The characteristic of the drop ball is that the speed is fast or slow, the strength is relatively small stick the net and the radian fall the point of accuracy, is the initiative attack important means. In form, the drop ball can be divided into forehand drop ball, overhead drop ball and backhand drop ball according to the different hitting position and technique. Through the change of the power, the height of the ball and the direction of the ball, and the change of the speed, line and Angle of the ball, a variety of balls are formed, so the players can choose the appropriate form of the ball according to the actual situation to achieve the goal of scoring.

#### 2.1 Main Features of Forehand, Backhand and Overhead Lob

The backcourt drop is divided into forehand drop, overhead drop and backhand drop according to the different hitting point and body position of the logger.

Forehand drop is a drop ball that is hit from the same side of the hand. It is also a technique of backcourt hitting, which is often used in matches because it is easier to master than other techniques, and the action is not difficult. If the ball is not especially passive, the forehand drop can be used. First of all, in the face of the other party for the ball is that we should make full preparations, before in his left foot, right foot, a direction of the racket eyes looking at the ball through the left hand to determine the speed and lob the ball to hit the ball, two toes slightly stand a body centre of gravity is on the right foot, his right hand forehand grip when the ball almost to the height of the ball, his right foot slightly crouch slightly. The foot movement is through the ground to turn the hip body counterclockwise rotation, the left foot to retreat while the body through the rotation of the right foot forward to complete the rotation. A right lunges forward the body's centre of gravity tiptoe is forward, body, toward to the direction of the ball and lift hand movement is hand hit the ball to the right height and forehand high action, only hand to hit the ball in the back of the power is then let the ball quickly and placement accuracy after network drops into each other's space, this completes the forehand lob. You should practice your landing point and ball speed to be accurate and fast.

Backhand lob is a backhand lob that USES the backhand side of the hand to push the ball down into the opponent's court. The backhand is arguably the most difficult of the three, as the technique is more difficult and requires more coordination of the body and hands and feet. Therefore, it is relatively difficult to train. There is no great difference between the backhand lob and the backhand lob, just a problem of power. Turned to move after the ball, the ball into the right finger point when the ball on wrist flip racquet face, turning the shoulder to arm can drive the forearm, control the speed of the swinging with the knife type forehand flips to the ball, hitting point to demanding and appropriate, let the ball from high to low a parabola exercise at a certain speed, and then they fall into each other in the net.

Overhead lob is the overhead area of the racket holder's hand that is hitting the ball facing the opposite side of the court. The overhead drop is an important attacking technique in the backcourt during the game, because the overhead drop changes a lot, compared with the backhand drop, the overhead drop is more aggressive and lethal, because the overhead drop is more powerful, so the ball will land faster and more pointy. There are also relatively more changes in routes. The overhead shot is characterized by better timing, faster speed, greater Angle, and more drop points, as well as greater consistency in movement. Even the shot can be faked to make the opponent do other moves. It is also a way of scoring directly or indirectly in the back court.

## 2.2 Line, Speed and Angle of the Drop Ball

First, there are many lines of the drop ball, most of the time we in order to fully mobilize the opponent in the field, we generally take the drop line back to the diagonal line, the drop line back to the straight line, attack hit the middle of the body or repeated landing way. In the process of the game, the choice of route is the key part to determine the quality of the ball, because a good route of the drop ball can win the active advantage, sometimes in the passive situation, a good shot of the drop ball with quality can even bring their own fighters, this is like marching and fighting, the horse did not move, the drop ball first. The line of hang ball basically has hang straight line, hang inclined line, hang two waist, hang diagonally namely we often say slant line. The line of the drop ball plays a vital role in mobilizing the opponent and controlling the ball. When watching the international games, we can find that the world's top players play many kinds of lobbing balls, and their shots are very decisive and steady, and even they will repeatedly drop the lobbing balls. In terms of technique and tactics, they have good effects in restraining the opponents.

Second, in the process of the game, the speed of the lob also has a corresponding change, according to the opponent's ability and the goal of the lob side, the lob speed also has a different change, such as fast lob, slow lob, the technique of the shot is also different. In general, the ball in the forehand area usually chooses the bag cut, and the ball in the overhead area usually chooses the skateboard drop, because the head ball is relatively passive and cannot cut and hit the ball, only through the skateboard drop. In the process of various hanging balls, the rhythm of the hanging balls should also change with the change, which is based on the actual situation of the opponent to choose, different from person to person. During the game, if the opponent is focused on defending the kill after the ball is thrown, then you can take a quick shot and even score directly. In this way, the speed and rhythm of our lobbing balls will be different according to different opponents, giving a fatal blow.

Third, the change of the Angle of the hanging ball is also one of the changes of the killing ball. The change of the Angle of crossing the net has formed the form of the hanging ball: slow hanging, fast hanging and collecting hanging. There is also the height of the net, which is also a kind of Angle of the hanging ball, the successful hanging ball requirements over the net height is not more than five centimeters, and after the net will go down, the general landing point in the net and the two sides of the baulk line between the area is the best place to fall, can be around the hanging ball to transfer the opponent If your drop ball is close enough to the net and your opponent is not quick enough to steal the net, then he has to pick it up.

The form of the drop ball has extremely rich changes, in the process of the game using different techniques, the Angle of the ball, the strength of the drop ball, as well as the Angle of the permutation and combination of the net, hit a variety of different forms of the drop ball, so as to control the offensive and defensive situation on the field. This is the different forms of the drop ball in competition in full use.

## 3. The Use of the Drop Ball in the Game

In the process of the game, the lob is an essential means of attack, not every time the opponent has the lob we should use, this is also according to the actual situation in the process of playing. Use lob technology in the process must grasp a good fighter, assess the situation, so can score directly, even if not directly points, then we can also through the lob to mobilize team hand movement, use the tactics which LaDiao let opponents before and after the run, or so LaDiao can let opponents run around, so that you can take the opportunity to win the initiative of the next. If the defense ability of the other side is better, we can make good opportunities for ourselves by putting the net to force the other side to take up the ball, thus changing the offensive and defensive posture of the whole game. In the process of the game, the effect of lobbing ball of different techniques is also different. So in the process of the game you use this shot is not necessarily in order to score, but also for the next shot to prepare and pave the way for the creation of opportunities, so that has achieved the use of the effect of the ball.

### 3.1 Direct Score, Indirect Score and Inhibit the Ball

Obviously, the role of the drop ball is many, generally can be divided into the following three aspects, direct equal, indirect score and inhibit the ball. Direct scoring refers to the ball given to the opponent and the opponent's return of the ball quality is not high and not in place, their attention is mainly focused on the defense of the two waist, so that they can take advantage of, suddenly a shot of fast hanging will make the opponent reaction, directly drop the ball to score; Or in the doubles game, the opponent is not in position to play the ball is preparing to defend, a slight drop, the ball is very close to the net drop point is very good, the opponent has no room to return the ball, this is the direct score. At the same time, we should not blindly use the drop ball in the game. Although a drop ball with efficient net contact

may score directly, if we often use it, we will give the opponent the opportunity to adapt to your ball path, which is not good for ourselves.

Indirect score is refers to the control on the site through the rhythm of the ball, let opponent error score a means, such as fast lifting a racket ball very sharp soon rival then can choose at this time the ball slow a beat, or start forehand hanging slash then change are both straight line, because of the slow hanging ball is posted net, so the effect will be even greater.

In the use of various types of lob, the opponent's line of the ball, shot rhythm, moving speed and our ball response judgment, have a great impact. Therefore, another important role of the drop ball is to restrain the opponent's ball. This means that both sides of the attack and defense posture change, when your lob is very fast, the forward ball will force the opponent to take the high point and force the opponent to have to lob, thus creating the opportunity for their own attack.

### 3.2 Cooperation and Application of the Drop Ball and Various Technologies

In the face of different opponents is the characteristics of the situation on the field is not the same, so our use of the drop ball will also change. Generally speaking, we can hook and other technical way to use up to a lot of, for example high ball and lob LaDiao union, kill the ball and lob LaDiao union, lob combined with Internet did to push to put, and so on, in the process of game does LaDiao kill put catches a few basic techniques that can combine their use in the game, this is very important, this is also a reflection of personal technique.

If the strong ability to kill each other, we can't kill each other within must shoot number, so this time is the kill after two shoot while its center of gravity down to meet kill kill the ball movement, under the cover of a pat down fast ball, or choose to drop spike the net ball, rhythm and can destroy the opponent catches by quality, combined with the use of technology that is killed. Therefore, the attack of the drop ball is not a single existence, but a reasonable choice and application in the cooperation of various techniques, so as to form a variety of ball, so that the opponent is unable to defend

Here are the technical scores of Lin Dan and three other players in the 2017 "sudirman cup"

	Lob score	Net score	high score	other	total score
Lin Dan	12	8	10	14	14
Chen long	3	13	9	9	34
Lee chongwei	8	4	6	31	49
Sun wanhu	9	5	1	31	46

From the above data, we can see that the score of the lobbing technique is far less than the total score of other techniques. Therefore, we should combine the lobbing technique with other techniques in the competition, so that the score of the lobbing technique will be improved, and the score of other techniques will also be improved, which is in direct proportion to each other.

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### 4. Conclusion

Lobbing is a commonly used method in the process of competition, but there are many ways to use the technique, especially backhand lobbing. In the process of watching high-level athletes compete, it is not difficult to see that a skilled use of a technique is a relatively effective way to improve one's technical and tactical ability. This requires a lot of practice combined with other techniques.

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