ANALYSIS OF THE SERVE EFFICIENCY 
WITHIN OFFICIAL GAMES OF A1 DIVISION LEVEL

Cristina HANTĂU

Abstract
Among various new elements that enriched the technical scientific knowledge of volleyball game there is also the serve which in modern game represents the first spike weapon against the opponent with the aim to make the opponent spike difficult and to reduce their chances of success or to get directly the point through an ace.
The present workpaper is proposing to draw the attention over the serve as the first technical - tactical weapon used against the opponents within official games as well its share into official games.

Keywords: volleyball, serve, record, efficiency.

JEL classification: I210, I230, I250

1. Introduction

The serve of the modern game represents the first spike weapon against the opponent which is more aggressive and with higher speed executed than origins of volleyball game. The aim is to make the opponent spike difficult and to reduce his chances of success and to get directly the point through an ace.

2. Problems approached

The present workpaper is proposing to draw the attention over the serve as the first technical - tactical weapon used against the opponents within official games as well its share into official games.

The goal of this endeavour is to make objective the parameters resulted from the recorders made during official games, so that to get oriented several specialized models of training and competition.

Due to very dynamic evolution of volleyball game pointed by appearance of certain elements and new technical and tactical procedures, it automatically reached to the regulation permanent changes and also to the new training and accomplishments.

1 Cristina Hantău, The Bucharest University of Economic Studies, hantaucri@yahoo.com
Among various new elements that enriched the technical and tactical knowledge of volleyball game there is also the jump serve. At the beginning this was used mostly in male teams as it was needed an extra physical training, but nowadays we notice that this procedure is used very often by the female teams also.

This proves that jump serve is considered a very efficient procedure with a higher risk but if the execution is well done may put the opponent team in great difficulty. That is the reason why more and more top female players and not only include it into the own technical and tactical knowledge.

Also, once this procedure has appeared, but others as well (topspin serve, float serve) and rules changing, the serve is not only an action to kick off, its feature changing into the modern game and thus becoming the first spike weapon much more aggressive offering the possibility to get the straight point.

With a special constant in doing the serve and a difficult serve with good tactic, a team can collect many points during the game, which are got with minimum energy consumption. In evaluation of a serve efficiency, this should be connected with the serve bump showing how much efficient the certain serve was or not.

The serve is an action based on the cognitive processes of observation, orientation and decision besides physical qualities and technical-tactical art are marked by direct point won or by disturbing the opponent attack while the serve bump implies the processes of anticipation, observing, orientation and decision from the theoretical point of view.

The aim of serve bump is to place the team in optimal conditions to achieve the attack combinations by driving the ball towards the action zone of the setter.

The serve and serve bump are sit on the game structure I and are not repeatable during a game phase.

The factors that determine the serve efficiency are:

- Place of execution;
- The way to hit the ball which may or may not make a rotation move influencing its speed and direction (trajectory);
- The speed over the ball the moment of hit;
- The ball trajectory which is influenced by the ball lack of rotation. Making a rotation from up to down towards ahead drives to shortcutting the ball descendent trajectory; if the hit is made light side the ball will catch a rotation on horizontal making a curve rotation;
- The serve orientation is pointed by the place where the serve ball is driven, this action ensuring most the tactic action feature;
- Opponents’ defense system;
The psychic sportman features as it is an individual technical tactical action. Depending on the game moment the score evolution may play a decisive role as well.

By the records achieved from a number of 9 official games (3 of 5 sets, 3 of 4 sets and 3 of 3 sets), we tried to conclude several information regarding the:

- Rating the number of actions during a game and their efficiency depending on the number of sets;
- Rating the number of errors during the game and their influence upon game’s efficiency.

Further to the records made, we noticed the following data, based on an average of all played matches, delimited by the number of played sets, as follows:

To the games of 5 sets we have a total of 178 serve actions in both teams of which

- 22 serves were errors (marked all with 0 – chart no.1);
- 97 serves marked with 1 that represents the serve for which the bump serve was with no problems and drove to the attack phase with all players capable;
- 54 serves marked with 2 representing the serve for which the forearm pass was very difficult making continuing or not the attack phase;
- 5 serves marked with 3 representing ace serves.

To the games of 4 sets we have a total of 166 serve actions of which:

- 19 serves marked with 0, representing error serves;
- 103 serves marked with 1 of which the attack phase could be done with no problems;
- 42 serves marked with 2;
- 2 serves marked with 3, which means ace serves.

To the games of 3 sets there were recorded 120 serves during the whole game of which:

- 10 serves marked with 0, which means error serves;
- 82 serves marked with 1 of which the spike was made with no problems;
- 22 serves marked with 2 of which forearm pass was very difficult continuing or not the attack phase
- 6 serves marked with 3 – ace serves.
Chart 1 Percentage representation of serve efficiency

From the chart above we notice that of the total recorded serve actions to all 9 teams a overwhelming percentage is represented by the serves marked with 1, which means those serves that do not make any problems to the opponent so that he can make its spike in optimal conditions. This thing proves that safe in action execution has been emphasized thus eliminating the risk of a failure if a serve in force is chosen to destabilize the opponent’s attack.

The next value as percentage is represented by the serves marked with 2 which means serves that raised more or less problems to the opponent when serve bumping to an optimal court in order to attack and this couldn’t be made in optim conditions, using one or two attackers as most.

A pretty significant percent is recorded by the error serves which can be interpreted in two ways:

- By the risk assumed the execution of the chosen procedure which means a serve in force with a certain rate of risk or the willing to drive the ball into a certain court or to a specific player considered weak forearm pass.
- The psychological factor due to the moment in set or of whole game.

The smaller percentage is represented by ace serves which means the serves upon which no one could interfere due to the high difficulty rate.
3. Conclusions

- A relatively large number of errors have been recorded during the whole match if we take into consideration that all these error serves are counted for the opponents as straight points;
- A very small number of ace serves were recorded (finalized with the straight point) for the level of A1 Division;
- It is noticed the recording of a large number of serves marked with 1 which means that serve is used just as mean of kicking off and is not used at is real value to get the straight point or prevent the opponents’ attack;
- Many players are not aggressive when serve.

We consider this technical–tactical action should be given more importance both during the game and training, in particular. The trainers should have a concept to impose the own players through which the serve being considered as a powerful attack weapon. This thing should be formed and maintained from the basics in forming the future players.

The organization of preparation and training should include the serve training into the game structure and conditions similar to the competition.

The record and data processing systemically used may offer real information upon each game action, not only the serve, giving us real data about the level we are ranked and where do we have to act or change and which means to use.

**BIBLIOGRAPHY**