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## STUDY ON THE CONTENT OF THE GAME AND EFFICIENCY OF ACTIONS OF CENTER IN VOLLEYBALL PLAYER

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### Abstract

The present paper entitled "*Study on the game content and the efficiency of the center player in volleyball game*" consist in analyzing model, due to essential changes occurred in the current competitive game content: increased speed of the game, increasing the strength of the attack, execution and service the lock and specific features of the takeover of attack changes due mainly to new changes in the regulation.

**Hypothesis.** That the game of volleyball is carried out by certain fundamental characteristics due to application and effectiveness of the game the players that make the team, printed features training model, determine the positions of the game, the players involved and the center position becomes an objective necessity which may lead to increased whole team game parameters.

**There have been a few tasks** off our research literature including information on the state of knowledge on the chosen topic, gathering information and data on game content in zone 3, in terms of weight and overall efficiency of game actions and for the two structures, analysis of results, their interpretation and separation of the most important conclusions of the theoretical and practical, which can be helpful in charge of training specialists.

**Method.** Mathematical processing of data from records is preferable to meet international standards developed by the FIVB, so we can relate to them (summarized by M. Serban, 1998 and 1999). Their scaling on 5 levels, as follow:

- 0 = wrong (-);
- 1 = keeping the ball in play to limit error (-0);
- 2 = continuation phase with limited tactical actions (0);
- 3 = optimal condition for continuation phase (+0);
- 4 = point (+).

The last level (4 = +) is found only decisive action: service, attack after reception, attack after digger and block. For the other actions: reception, setter after reception, digger. and setter after digger have only four levels, the latter being seen as a great (3 = + 0 ) as there are actions completed and linking players play the same team.

**Conclusions.** Research conclusions have been systemized on issues that were derived from the general hypothesis of the study.

**Key words:** game, efficiency, skill, volleyball

### Introduction

One of the important objectives targeting high performance and great performance in sports games in our country is the determination and content knowledge in the international game of high-performance athlete. Development of a new concept in sports games, it is necessary and possible to fund aims to determine, based on the science involved, game content and efficiency, to ensure the necessary information sports performance (Niculescu, M., 2000). It can be designed to recover sports games on the national performance without objective knowledge of game content, the performance achieved international knowing the fact that the game content differences are major (Ghenadi, V. 1995).

Volleyball game, relatively simple, once, by training players and multilateral actions scroll speed of the game, get to enjoy a wide increasingly accepted by the audience. Practicing intense dispute between the

actions of attack and defense to win points, based on a thorough analysis of the structure and orientation in new directions, according to current and future needs, displays volleyball game in the first world affirmation plans with other sports performance (Ioniță, M. 2007). Determination volleyball, is to adequately solve the problem of game specific analysis in general and for each item the team in the weight training and getting performance issue that has always attracted great interest, being a prime concern order of coaches, doctors, scientists, athletes and others involved in the movement of high-performance volleyball players (Mârza, D. 2006).

To identify the senior player in the team would make the stage knowing they are in the content, effectiveness, and directions in which the game is going evolution performance teams (Păcuraru A, 1999).

Therefore, we considered that developing models positions, can lead to learning and exact

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knowledge of the content and effectiveness of all actions during the game, being able to provide information necessary to enter the most appropriate training in accordance current competitive reality game, leading to obvious progress's volleyball competitions at large scale. The efficiency of middle blocker has other coordinates (service, taking the service, attack, block, attack takeover) and now there are only three components (service blocking attack) which reconfigures its preparation and training objectives

Achieving accurate content analysis according to the reality of the competition game can give us a great deal of accurate information on the game of the center player, middle blocker or how the shooter was formerly called the main information that can provide essential and indispensable parts in preparing players for the job and also the development of a model on new game (Cojocaru A., 2007). Determination of the content game should contribute to the knowledge state volleyball practice at this level, the reference is the internal competition reality game.

### Hypotheses of research

Determination of the content game should contribute to the knowledge state volleyball practice at this level, the reference is the internal reality competition.

To check the working hypothesis we sought to obtain from the records at the National Senior Games Championship - information on successful and unsuccessful actions during competitive game player to the center. This was directed to determine their effectiveness and to detect and find real solutions to eliminate errors and improve game.

May come off the following tasks for our research:

- literature information on the state of knowledge on the chosen topic;
- gathering information and data on game content in zone 3, in terms of weight and effectiveness of the game in general and the two structures;
- processing information and highlighting the most characteristic aspects of the game content in zone 3;
- analyzing the results, their interpretation and separation of the major conclusions of the theoretical and practical, which can be helpful in charge of training specialists;
- structure and development of research findings.

**Research methods** were:

- method of documentation;
- observation method
- method call;
- statistical and mathematical methods of recording

and data processing;

- modeling method

### The way data processing

Mathematical processing of data from records is preferable to meet international standards developed by the FIVB 1992, so we can relate to them (summarized by M. Șerban, 1998 and 1999). Their scaling on 5 levels, as follows:

- 0 = wrong (-);
- 1 = keeping the ball in play to limit error (-0);
- 2 = continuation phase with limited tactical actions (0);
- 3 = continuation optimal conditions for of phase (+0);
- 4 = won (+).

“As” (evaluated 4) is used only for actions serve, attack and block, .

“Full control” (evaluated 3) is used when all possibilities for building created game of phase.

“Limited control” (evaluated 2) is used when preparing attack can be achieved using all options.

“Without control” (evaluated 1) is used where building attack is possible, thus still remaining the ball in game.

The formulas used to calculate efficiency actions were as follows:

Serve and attack

$$E = \{4 \times (4 - 0) + 3 \times (3) + 2 \times (2) + 1 \times (1)\} \times 100/4 \times N$$

Setting

$$E = [3 \times (3) + 2 \times (2) + 1 \times (1) - 1 \times (0)] \times 100/3 \times N$$

Block

$$E = [4 \times (4) + 3 \times (3) + 2 \times (2) - 1 \times (0)] \times 100/4 \times N$$

Reception from serve and attack

$$E = [3 \times (3-0) + 2 \times (2) + 1 \times (1)] \times 100/3 \times N$$

### Interpretation of results

In order to analyze better and detail of zone 3 player game I made several types of models, such:

**The model of content the game** - developed for accurate knowledge of the average share of game actions, the number of points earned and lost in the average set by the center player.

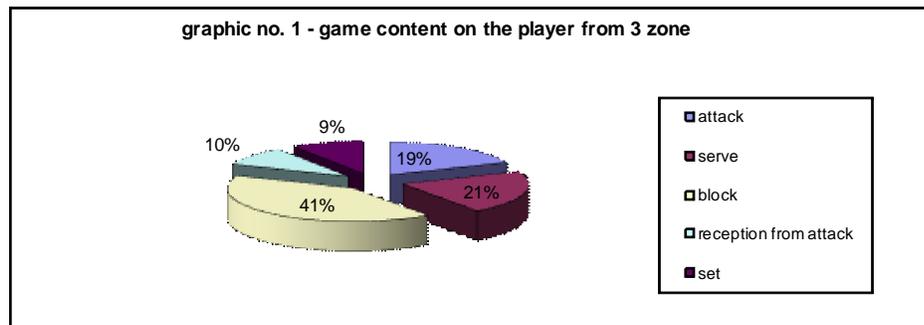
**The model of actions game** – made in order to know exactly the content and effectiveness of all actions of the player specific game 3, how each action is used in the game by the player and each share contribution in winning or losing points and sometimes the services in accordance with reality of the game competitive at this level.

After processing the information and data obtained through records in league games we have developed the following model, whose average values are shown in the table below:

Table 1 – The number of actions for set

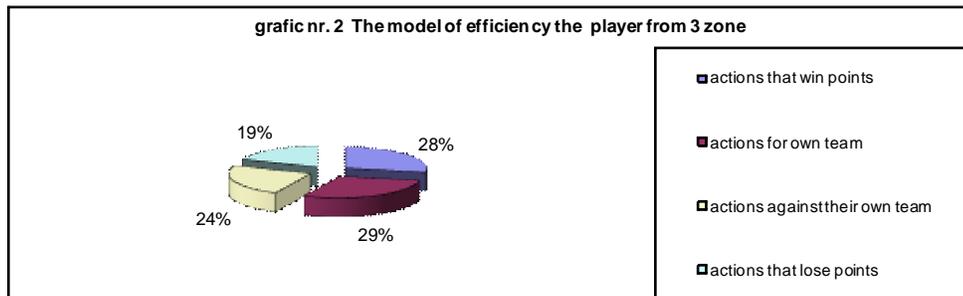
No.crt.	COMPONENTS MODEL	Average number actions / Set	PERCENTAGE
1	Average number of actions./ Set	19,3	100%
2	Atack	3,1	16%
3	Serve	3,3	18%
4	Block	6,8	35%
5	Reception from attack	1,5	8%
7	Set	1,5	8%

Graphically elaborated model is as follow (graphic nr. 1)



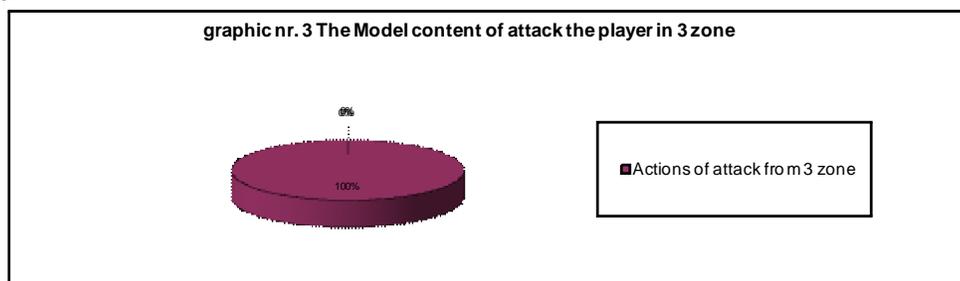
The average values are obtained when the following:  
 Of 19.3 action game made by a player of zone 3 during a set, it:  
 - game average of 5.3 actions that win points, representing 28%

- game average of 5.3 actions in favor of team, representing 29%  
 - game average 5 actions in play against own team, representing 24%  
 - play on average 3.5 actions that lose points, representing 19% of the game.



After processing the data we obtained the following pattern of attack content:  
 - total actions of attack per set: - 6,8 representing 100%

- actions of attack from 3 zone - 6,8 representing 100%

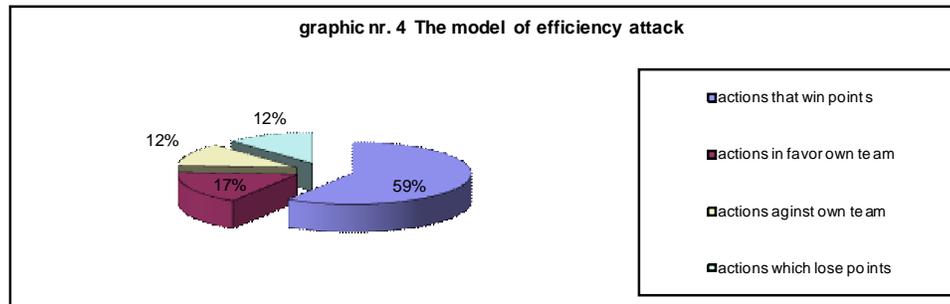


In order to obtain of a complete image of the game rendered the player attacking zone 3, we developed a model of efficiency of attack, which is so:

Of 6,8 actions game made by a player of 3 zone during a set, it:

- game average of 4 actions that win points , representing 59%

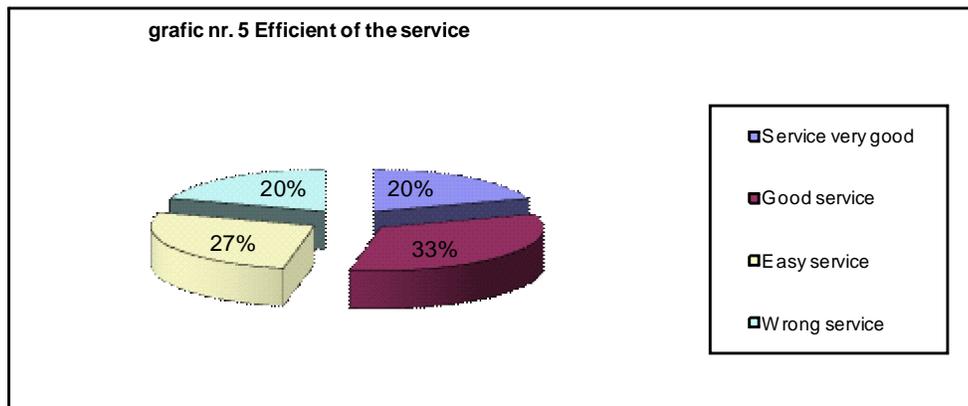
team,  
 - game average of 1,2 actions in favor of own representing 17%  
 - game average 0,8 actions against own team, representing 12%  
 - game average 0,8 actions which lose points representing 12%



In the functional model of the player 3, service occupies a prominent place in the hierarchy of action game, that player runs an average of 3.3 services per set, the second action as a share of total shares game.

Of 3,3 actions game made by a player of 3 zone during a set, it:

- game average of 0.2 actions that win points, representing 20%  
 team,  
 - game average of 1,2 actions in favor of own representing 33%  
 - game average 0,8 actions against own team, representing 27%  
 - game average 0,2 actions which lose points representing 20%

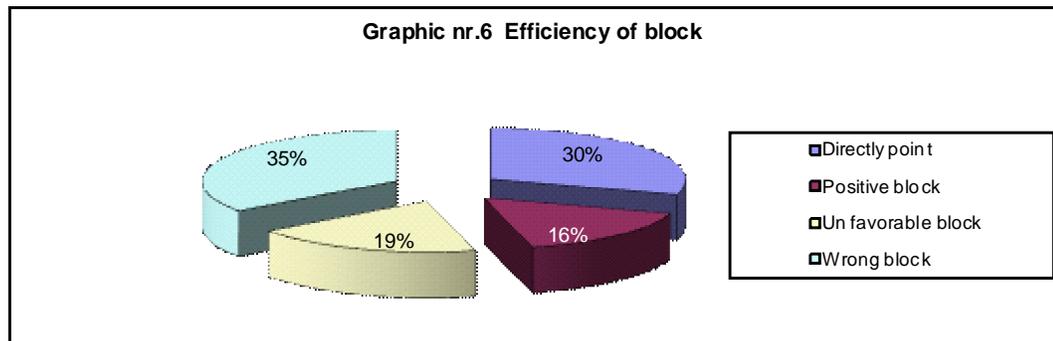


The effectiveness of this action is set at a level high enough for this player so out of 3.1 shares per set:

Of 3,1 actions game made by a player of 3 zone during a set, it:

- game average of 0.9 actions that win points, representing 30%

team,  
 - game average of 0.5 actions in favor of own representing 16%  
 - game average 0,6 actions against own team, representing 19%  
 - game average 1 actions which lose points representing 35%



### Discussion

Mention that a player set a maximum of 48 teams participating in the basic game situations if the set ends 25-23, of which 52% are playing fundamental situation in service execution and 48% play fundamental situation takeover of service (Ghenadi, 1995). These percentages change if the sets are won more clearly, the fundamental situation in winning percentage increasing and decreasing percentage the service the other.

*For example* : set ends with 25-15:

- game to the service - 62,5%
- game to the receiving of service -37,5%

Returning to the first example, when set to play to 25-23 score in 48 basic situations played, 75-80% have been formed from a single rally while only 20-25% were composed of 2 and 3 phases, growth conditions and requirements at maximum effort.

In these conditions a set play on average 410 to 415 action game, of which 40-45% are playing ball action, and 55-60% share playing without the ball. On average a player plays the actions set about 40-70 games of which 16-40 ball action, the number being higher or lower depending on the value of each player in the band and station that plays it.

Consequently, a volleyball game, a player participates in almost all actions of the game with the ball and without the ball, which according to the number of sets played (3, 4 or 5) can be between 120-350 stocks of game, which shares 50-200 game in which the ball touches in one way or another (Păcuraru, 1999).

The player 3 or player from the center, as it is called, generally participate in a real balance to all acts of game, it is a balanced mixture of the other positions listed.

Full evaluation in accordance with the reality of the game player competitive game of the 3 is made with efficiency calculation and comparative analysis achievement and graphical representation.

### Conclusions

Research findings have been collated on issues that were derived from the general hypothesis of the study:

The data presented in the content model of the game is noted that one of the essential and paramount changes of this post, is the blocking effective action.

The player 3 is a complete player in the first line, which should be in addition to a good player and a very good offensive player to block.

Blocking action game is the most important player of the game 3, its value and job requirements within the team is essential and often defining the winning game; Finalized (especially attack and block);

Is necessary to increase the concentration in the game, to eliminate relaxation moments of inattention and service occupies a top place in the hierarchy of game actions as average number of actions per set and less like efficiency. It is noteworthy that the decrease in efficiency due to new regulations of the service; Setting is an act with a smaller percentage of the player in the game but the greatest efficiency, that due both to fewer exceptions and that runs relatively mild conditions, when the linkage involved in reception.

This research trying to make a real and analysis as conclusive, the content and effectiveness of the player of the game 3 senior level, we found that this post is of great importance especially in a team game, in that these players are generally the most valuable defensive game economy they are the best players blocking team and participate in approximately equally in both departments of the game in attack and defense in line I.

After the assessment found that the seniors, this player does not comply, in many situations this post requirements for high performance volleyball. Many of the data representing the content and effectiveness of the game are below the level of scale in international competitions, but the national championship this level is appropriate, indeed one can observe a growing interest in increasing the value of these players



### Bibliography

- COJOCARU, A., 2007**, Model și modelare în voleiul de performanță, Editura Universitaria Craiova.
- GHENADI, V. și colab. 1995**, Volei – obiectivizarea instruirii, Editura PLUMB, Bacău, pp 121
- F.I.V.B. 1992**, Manual for Statistical Match Record. FIVB, Fotocopie FRV.
- IONIȚĂ, M., 2007**, Modelarea pregătirii jocului de volei din perspectiva modificărilor regulamentului, Editura Universitaria Craiova, pp.88.
- MÂRZA, D., 2006**, VOLEI - Bazele teoretice și metodice, Editura PIM, Iași, pp. 85.
- NICULESCU, M., 2000**, Volei de la teorie la practică, Editura Universității din Pitești, pp 79.
- PĂCURARU, A., 1999**, Volei: Teorie și Metodică, Editura Fundației Universitatea “Dunărea de jos”, Galați pp 101.
- ȘERBAN, M., 1999**, Gândirea – Factor de optimizare a modelării. Volei; Editura Printech, București pp 82-90.