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Original Article

The Importance of Using the "Data Volley" Software and of the "Data Video" System in the Tactical Training of the Middle Blocker for Official Games

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Abstract

Nowadays, the level of professional volleyball has increased significantly, having such dynamic and speed of execution of the game actions, that it is very difficult to watch the game in its depth without using some special programmes of statistical analysis. In this context, for a fair and precise assessment of the game actions, there are used both statistical, as well as video evaluation software programmes, so as not to miss any important detail during the games. One of the most used programmes in professional volleyball is "Data Volley", which includes a video system of analysis and evaluation called "Data Video". These were designed so as to simplify the work of the coaches, in analysing their own game, as well as that of the other team. The purpose of this study is to analyse the game of the other team before official games, on offence and defence, using the "Data Video" system.

1. Introduction

We live in a modern world of technologies, where people must make important and quick decisions every day, which is why the statistics play a significant role both in everyday life, as well as in high-performance sports (FIVB org., 2011). The level of professional volleyball nowadays has increased significantly, with such a dynamic and speed of execution of the game actions, that it is very hard to watch the game in its depth without using some special programmes of statistical analysis (Togninalli, 1998).

In order to achieve a very high level in professional sports, the teams must be flexible, with a technical-tactical game basis with which to be familiar and which can be used with the majority of opponents. As the teams improve their game level,

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approximately 30-40% of the sports training is directed towards the tactical preparation depending on the opponents. This thing implies significant research, both from a statistical point of view, as well as from a general scientific one. In this context, for a fairer and more precise assessment of the game actions, there are used evaluation software programmes, both statistical, as well as video ones, so as not to lose any important details during the games (FIVB org., 2018; FIVB org. 2014; Pârvu, 2017, Rocha, & Barbanti, 2006; Nishijima, Ohsawa, & Matsur, 1987).

2. Material and methods

This thing happens also in the current high-performance volleyball, when most coaches use high-tech software programmes, offering genuine, accurate information and real time data that can later on be interpreted and used so as to identify the weaknesses of the rival team or the problems within one's own team (Togninalli, 1998; FIVB org., 2014). One of the best and most used software programmes in volleyball is "Data Volley", which includes also a system of video evaluation, called "Data Video", a fast and effective programme for the recording, assessment and analysis of the game actions in volleyball (Data Project, 2007).

The resulted statistical data can be used as such:

- during the official or friendly games;
- before the official or friendly games;
- during practices.

In this study, we are going to use the Data Volley software as a tool in the tactical training of the Middle Blocker for the official games. The main objective is to be able to offer useful information to the Middle Blocker, so as to ease his work and to increase his efficiency within the team, exploiting to the maximum the weak points in the ensemble of the opponent team.

The subjects of this study were players of the Arcada Galaţi team, a team evolving in the First Division of the Male Volleyball, where as coach, we had access to the entire material basis of the club, including also the "Data Volley" statistical analysis software.

3. Results and Discussions

For this study, we chose to analyse the games within the National Championship of A1 Division Male Volleyball between C.S Arcada Galați and SCMU Craiova, the counter-candidate to the title of National Champion. The tactical training of such an official game is very wide, which is why in this study we are going to concentrate only on the tactical training of the Middle Blocker, a player specialized on blocking, attack and service, being replaced in the second line by the Libero.

With the occurrence of the Libero (player specialized on receiving from service and defence in the second line), modern volleyball has evolved so much due to the specialization in game positions. In the volleyball team, there are five game positions, called as follows: the Setter, the Outside hitter, the Opposite, the Middle Blocker and the Libero. A strong team of high level must have players with

such technique, physical training and mental abilities that make them capable to put into practice a variety of game systems suggested by the coach. The complexity of the game systems depends on the technical-tactical level, the physical training and the capacity of players to adjust to different game situations (Bompa, 2001; Rocha, & Barbanti, 2006; Nishijima, Ohsawa, & Matsura, 1987).

Due to the competitional system of games unfolding, we could play several games against the same team, which is why we could analyse the performances of our own players from one game to another. In the current case, we studied both the other team, as well as our own team, from the perspective of the tactical training of the Middle Blocker, which can lead to the increase of efficiency of this game position and implicitly, of the game of the entire team.

Table 1. *Criteria analysed in view of the tactical training of the Middle Blocker*

Criteria analysed statistically and by video	**Tactical training of the Middle Blocker**
1. Distribution of the other team's Setter →	- Options of the Middle Blocker in blocking
2. Directions of attack of the other team's Hitters →	- Organising the blocking – defence depending on the directions of attack of the opponents
3. Blocking of the opponent team →	- Identifying the opponent players with the weakest blocking - The role of the Middle Blocker being that of creating space in the attack for one's own teammates.
4. Takeover from the service of the opponent team →	- Tactical service on the players with the weakest percentage in reception.

In view of a more conclusive analysis, we selected four criteria of analysis, of the previous direct games from the first part of the championship against the SCMU Craiova team.

The first criteria subjected to analysis is the other team's Setter, with a significant role in the success of a volleyball team. For an accurate analysis, with the help of the "Data Volley" software programme, we extracted statistical data, video montages and graphical analysis with the distribution of the other team's Setter for each and every rotation, and the place where the other team's Middle Blocker is called in the combination selected by the Setter, this evaluation having he name of "setter call". The blue arrows represent the place where the Middle

Blocker is called by the Setter, in the respective combination (Fig.1).

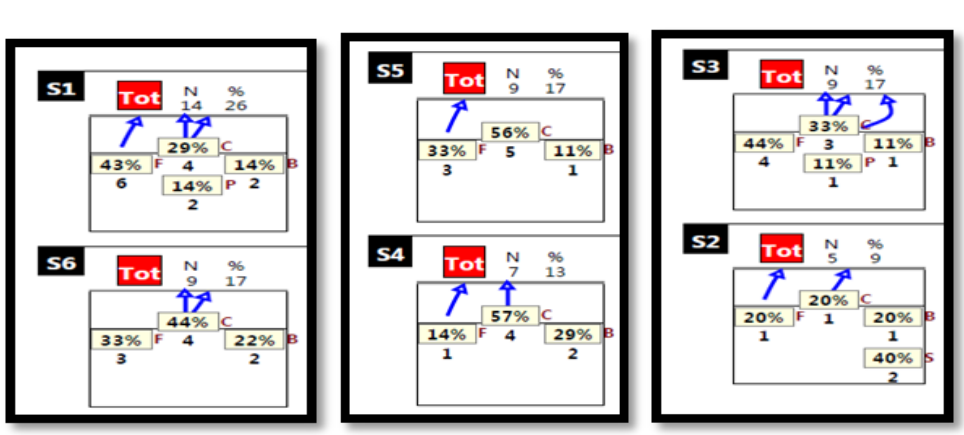

Figure1. *Distribution of the other team's Setter for each and every rotation*

Following the evaluation of the other team's Setter, we can establish a strategic game plan for the Middle Blocker. Having such information from the game plan of the other team, we can watch for:

- the most used player in a certain position or the most used combinations;
- the most used players in attack, depending on the reception;
- the habits of the Setter depending on his position in the field;

The second analysed criterion is the position and abilities of the other team's players in blocking, in view of identifying their weak spots, so as to put into practice the most offensive plan. In this context, we analysed the tactical choices used by the Setter per each rotation, in organising the offensive game, from previous games. Here, we watched the rotations of one's own team, where our players were efficient, but where they were also not efficient in attack, as well as the abilities of the other team's players in blocking. We also used video montages here, so as to identify the tactic of the other team in blocking, as well as the individual technical-tactical qualities of the players. (Fig. 2).

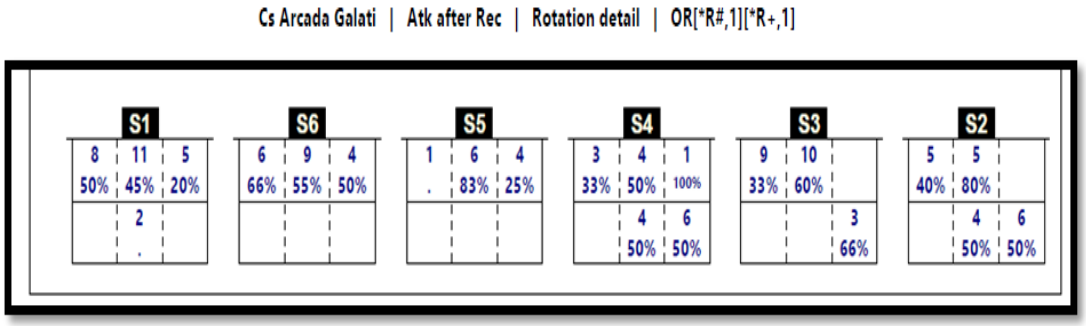

Figure 2. *The efficiency of the Arcada team in percentages and number of attacks for each rotation*

With reference to figure 2, we can notice that in certain rotations, the percentage in attack on certain areas is actually very poor. For example, when the Setter is in Area 1, we have a fairly poor percentage, of merely 20% to the attack of the player in area 2; with the Setter in area 5, we have a percentage of 25% also in area 2, when the Setter is in positions 4 and 3, we have a weak attack from area 4. Analysing also the percentages of the Middle Blockers, we can notice that even there we have 45% and 50% percentages in attack in rotations 1 and 4, results that are not so good in numbers for a player who generally gets passes when the reception is good, meaning in ideal situations.

That being said, we could draw the conclusion that it is necessary to organise the game slightly different from a tactical point of view, in certain situations and rotations, because the information gathered from the video and statistical analysis shows us that our strategy was not very efficient in some circumstances.

We continued by analysing the directions of attack of the players from the other team and by discovering the areas where most attacks of each player were performed, in turn. In figures 2, 3 and 4, we have the directions of attack of the players per game positions, from which we can gather important information about the Middle Blocker in view of organising the blocking within the team. With such information, the Middle Blocker can make quicker decisions related to the organisation of the blocking and is to convey that choice to the teammates in the Hitter positions.

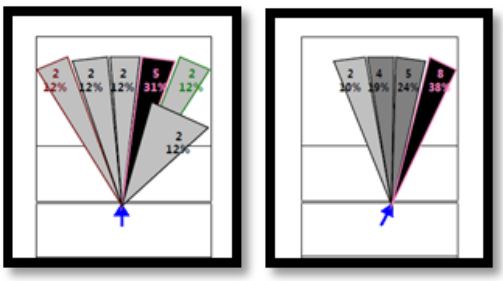

Figure 2. *Directions of attack of the Middle Blockers*

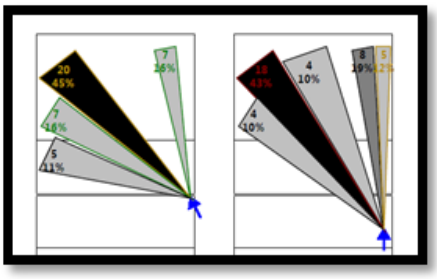

Figure 3. *Directions of attack of the Opposite*

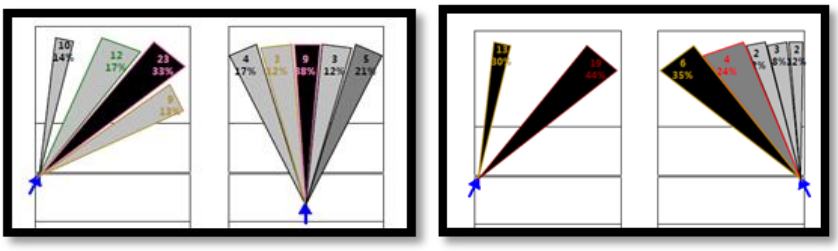

Figure 4. *Directions of attack of the Outside hitters*

The last technical element assessed in view of establishing a game tactic, to be useful to the Middle Blocker, is the analysis of the reception from service of the other team's players. Here, we have as goal the identification of the weaker players in performing such technical element. We extracted the actions of the main players in receiving from service, so as to have clear statistical data related to the percentage of each player in turn. (Table 1).

Table1. *Graphical statistics of the outside hitters*

Reception	Efficiency	Total	Errors	Negative	Positive	Perfect
Kliamar	33%	158	14 (6%)	39 (25%)	53 (34%)	52(33%)
Ene	19%	91	3 (3%)	23 (25%)	18 (20%)	36(40%)
Mărieș	24%	111	4 (4%)	35 (32%)	32 (29%)	37(33%)

Also here, we watched video montages with the other team's players in reception, so as to identify weak rotations and the areas where certain players are more ineffective in reception. Identifying the areas where the other team is weaker, or the preferences of the other team's Setter depending on reception, we can more easily organise our offensive game.

Following the analysis made to the other team and the gathered information, we can say that we have enough data for the Middle Blocker to have all the necessary tools in taking the best tactical decisions.

The tactical plan before an official game includes:

- clear priorities in blocking for the Middle player, under circumstances of good reception;
- active participation of the Middle player in all the combinations initiated by the Setter, so as to create space to one's own teammates in attack;
- organising the blocking together with the Hitters, depending on the preferences of the other team's Setter and the directions of attack;
- tactical service for the players with the weakest percentage in reception, in a certain position or a certain rotation;

All such tactical pieces of information were prepared and applied in the following games, and the results showed up immediately. Therefore, in one of the first made statistics (Fig. 5), we can notice a visible increase of the efficiency in attack in all those six rotations. These percentages were owed to a better organisation of the game by the coordinator, but also to the fact that the Middle Blocker actively participated in all the combinations and tactical schemes planned by the Setter.

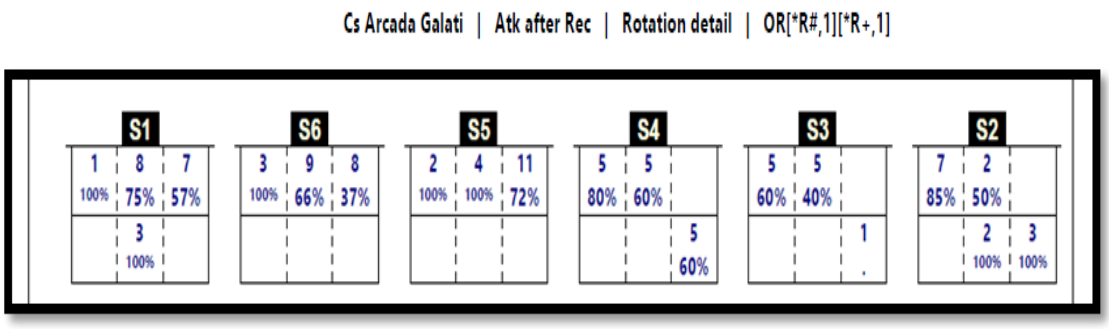

Figure 5. *Statistics resulted from applying the tactical plan, by the Middle*

4. Conclusions

Analysing statistically and by video all the elements suggested in this study, we can say that observing a tactical plan, the made choices and the proper execution of the technical-tactical elements will ensure an efficient game, both in defence and in attack.

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