

Performance Analysis in Team games (ΑΠ-197επ)

Lecture 3

Data Collection in Sports Performance Analysis

The Importance of Objective Data and Video

- Collecting objective information for individual or team performance
- Combining objective data
- Creating a system for producing objective data and video feedback
- Example
 - Soccer Passing accuracy
 - Player A 100% (33/33)
 - Player B 91% (21/23)
 - +Video
 - Player A 33% of 33 passes were short, lateral passes in his own half of the court.
 - Player B 30% of 21 passes were forward, vertical in the middle 1/3 of the court.
- Data combined with video offers a holistic approach.

Sports Performance Analysis and reporting

- Value of Performance Analysis
 - Providing an accurate picture of events
 - Supporting athlete development and coaching decisions
- The importance of accurate data
 - Avoiding misinterpretations
 - Focusing on objective information

Analysis Environments

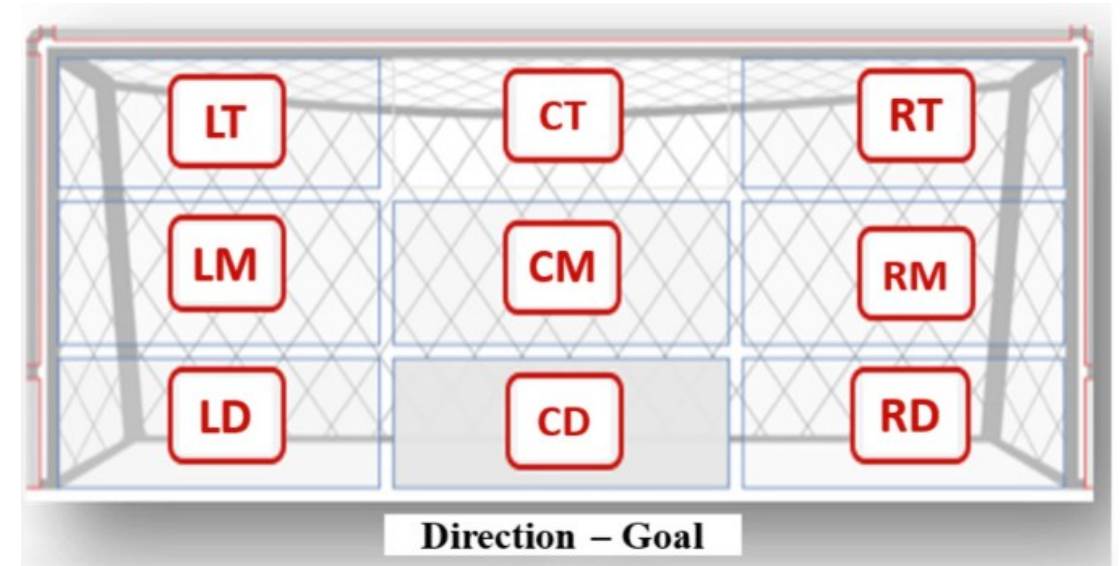
- Live Analysis, Post Game Analysis and Training Analysis
 - Advantages and disadvantages of each environment
 - Opportunities for immediate changes or in-depth analysis
- Live Analysis
 - + immediate changes and decisions
 - - Usually, the volume of data is limited. Difficulty in making meaningful decisions (e.g. [Settex](#)).
- Post Game Analysis
 - + Concentration on analysis, planning training interventions, Gathering more data. Additional data (Synchronization of analysis data with biometric data)
 - - No possibility of intervention in the match
- Analysis in Training
 - + immediate feedback
 - - Limited sample

What to analyse?

- Tactical Analysis
 - Examination of the broader strategies
 - Observation of repeated tactical patterns
 - Example: Analysis of the line-up in volleyball (pptx), Fives that win in basketball, set pieces in football.
- Ανάλυση Τεχνικής
 - Examination of the way a skill is performed
 - Improving the efficiency of the movement and avoiding injury
 - Individual and team sports
 - Example: Analysis of the serve in tennis, volleyball
- Efficiency Analysis
 - Examination of the result of the skill, not the quality of the skill
- Decision Analysis
 - High-end analysts
 - Decision outcome
 - Alternatives
- Motion Analysis
 - Combines technique and tactics (motion on the court with or without the ball)
 - Maximum speed, acceleration, deceleration, overall movement, jumps, etc.
 - GPS, LPS, automated process

Analysis of Efficiency

- Penalty Kicks Soccer
- Observation data
 - Goal/no Goal (efficiency)
 - Result of the match
 - Time divided in 15'
 - Row score
 - Home advantage
 - Execution (which foot)
 - Direction (10 categories)
 - Additional data?
 - Speed of the ball
 - Biometrics
 - Anthropometrics
 - Selection of side for approach (shooter)
 - Distance from the ball (goalkeeper)



Quality over quantity

- Variables  Key Performance Indicators
- Understanding the importance and usefulness of transmitting information
- For an analyst, communication skills must not be underestimated
 - Interact with colleagues
 - Communicate and listen
 - Manage time
 - Problems' solver
- Quantity compared to quality does not refer to the amount of data (e.g. from many matches), but to simplicity and the provision of important KPIs
 - Soccer
 - Passes per match 800-900 (quantity)
 - Direction, player, outcome, area of delivering, pressure of defenders (quality)
- Avoid too general PI.
- Focus on detailed data

Establishing indicators for SPA

- Establishing standards for measuring performance
 - Benchmarks
 - Summary performance indicators (e.g. points/errors from a skill, Final passes/possession, shots on target/ running distance)
 - Operational definitions (agreement with coach)
 - Description
 - +video (reception in Volleyball)
- Use detailed KPIs to shape interventions in the coaching process

<i>Sport</i>	<i>Generic Key Performance Indicator</i>	<i>Detailed Key Performance Indicator</i>
Soccer	% Shots on Target	% Shots on target inside penalty box
	% Final Third Entries	% Final third entries resulting in shot
	% Passes Completed	% Passes completed breaking the line of defence
Tennis	% 1st Serve In	% 1st Serve in when serving to T, Body, Wide
	% Rallies Won	% Rallies won at the net
	% 1st Serve points won	% 1st Serve points won serving to deuce court
Rugby union	% of Tackles completed	% of Tackles (Type) completed in amber zone
	Number of Phases	% of Phases in red zone leading to points
	% Lineouts won	% 5 Man lineouts won in green zone

Meaningful data collection

- What?
- Why?
- Who?
- When?
- Where?
- How?

Performance indicator	Performance Variable	Data	Type of data
Performance indicator	1. What?	Outcome	
	2. How?	Type	
	3. Where?	Location	
	4. When?	Time	
	5. Who?	Player	
	6. Why?	Other data	



Meaningful data collection

- What?
- Why?
- Who?
- When?
- Where?
- How?

Performance indicator	Performance Variable	Example questions	Example events
% of turnover resulting in a shot	1. What?	Turnover Outcome	Attempt 1pt/2pt/3pt Lost of possession
	2. How?	Type of turnover	Steal/rebound
	3. Where?	Location on court	Mid court/ def 3rd
	4. When?	Time in match	Quarter/xx:xx
	5. Who?	Who won the ball	Number
	6. Why?	Type of defence	Man marking or zonal



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