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Determining the Structure and Integral Assessment of Technical and Tactical Activity in Highly Qualified Football Players across Different Playing Positions

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Abstract

Objectives. The study aimed to determine the structure and integral assessment of technical and tactical activity in highly qualified football players across different playing positions based on a systematic approach.

Materials and Methods. The study was conducted during the UEFA European Football Championships in 2021 and 2024. The competitive activity of football players representing the national teams of England, Spain, Italy, Denmark, the Netherlands, Belgium, Romania, Slovenia, Austria, Switzerland, Sweden, North Macedonia, Serbia, and Ukraine was analyzed. The following research methods were applied: theoretical analysis of scientific sources and literature, pedagogical observation, video analysis of competitive activity, and methods of mathematical statistics.

Results. The technical and tactical activity structure in highly qualified football players across different playing positions — full-backs, central defenders, defensive midfielders, central midfielders (inside midfielders), wide midfielders (wingers), and forwards — was determined. It was established that the performance of ball control actions, passes, dribbling, feints, tackles, interceptions, and shots on goal differs significantly across playing positions, which reflects the specific characteristics of their competitive activity.

Conclusions. The findings suggest that the identified structural indicators and integral assessment of technical and tactical activity in highly qualified football players across various playing positions allow for more effective managerial decision-making in both training and competitive processes of football teams.

Keywords: UEFA European Championship, systematic approach, coordination complexity modes, specific coefficients, managerial influence.

Introduction

Effective management of a football team is determined by a rational approach to monitoring and analyzing competitive activity, both at the team level and with regard to players occupying different playing positions. During a match, depending on the tactical system applied, football players perform various functional roles characterized by specific features. This primarily concerns the execution of technical and tactical actions during the phases of ball possession and ball recovery, areas that have been extensively studied by researchers (Papadopoulos et al., 2023; Soroka et al., 2023; Goranović et al., 2024). However, competitive activity in football is highly complex due to the large number of technical actions involved, the constant change of game situations, the high level of coordination demands, and intense psychological pressure, all of which complicate comprehensive analysis. Quantitative and qualitative indicators of technical and tactical activity differ significantly depending on playing position, which makes it impossible to apply a single set of indicators to all players (Arjol-Serrano et al., 2021; Karpa et al., 2021; Perepelytsia et al., 2026). Consequently, the problem arises of determining

the structure and integral assessment of the technical and tactical activity of highly qualified football players.

Scientific research aimed at identifying the structure of technical and tactical activity of athletes in team sports, including football, has been conducted by both domestic scholars (Oliinyk et al., 2021; Mezhvynskyi, 2024; Bezmylov et al., 2025) and international researchers (Ferrari et al., 2022; Tojo et al., 2023; Sitti & Rangubhet, 2025). In particular, studies by Solovey et al. (2020), Shchepotina et al. (2021), Mitova (2022), and Kostyukevych (2025) focused on developing general principles for monitoring and analyzing technical and tactical activity in team sports. As for determining the structure of technical and tactical activity of players occupying different positions, this issue has been investigated in basketball (Doroshenko et al., 2020; Hatem et al., 2020), handball (Pueo et al., 2022; Nagy et al., 2025), volleyball (Shchepotina et al., 2019; Lima et al., 2021), and field hockey (Kostiukevych et al., 2020, 2025; Konnov, 2021). These studies examined the structure of technical and tactical activity with consideration of the execution of key game actions specific to each team sport.

In football, the structure of technical and tactical activity of both players and teams has been analyzed in studies by Kostiukevych et al. (2022, 2023) and Mezhvynskyi (2024). It should be noted that these authors investigated the structure of competitive activity while taking into account the integral assessment of technical and tactical performance.

A review and synthesis of scientific literature indicate that this issue remains highly relevant. A significant gap persists between the need for position-specific assessments of football players' technical and tactical activity and the limitations of current unified, position-independent approaches.

First and foremost, there is a need to identify indicators of the structure and integral assessment of the technical and tactical activity of highly qualified football players occupying different playing positions who represent European national teams. This is due to the necessity of determining model (benchmark) values that could serve as reference points for athlete training (Shchepotina et al., 2021; Sobol et al., 2024; Shlonska et al., 2024). The purpose of integral assessment is not merely to state empirical facts but, in the long term, to use it for effective management of the training process and adjustment of its content and structure based on the obtained data (Leibo et al., 2021; Adamchuk et al., 2023; Wang et al., 2025). Thus, the development of a scientific and methodological approach to the integral assessment of technical and tactical activity that takes into account the individual specificity of each playing position is a relevant task for improving the effectiveness of training highly qualified football players.

Research Hypothesis. It was hypothesized that identifying differences in the structure and integral assessment of the technical and tactical activity of highly qualified football players would make it possible to determine model values for each playing position, which, in turn, would allow the identification of prospects for adjusting the training process and individual player preparation.

The purpose of the study was to determine the structure and integral assessment of the technical and tactical activity of highly qualified football players of different playing positions based on a systematic approach.

Materials and Methods

Participants

The study involved pedagogical observation and video recording of the competitive activity of national football teams during the UEFA European Football Championships in 2021 and 2024. The competitive performance of football players representing the national teams of England, Spain, Italy, Denmark, the Netherlands, Belgium, Romania, Slovenia, Austria, Switzerland, Sweden, North Macedonia, Serbia, and Ukraine was analyzed. In total, the competitive activity of 206 players was examined, including 45 full-backs, 38 central defenders, 29 defensive midfielders, 38 wide midfielders (wingers), 35 central midfielders (inside midfielders), and 21 forwards.

Study Design

Pedagogical observation was applied in combination with video analysis of the competitive activity of national football teams during the UEFA European Football Championships in 2021 and 2024 in order to record the main technical and tactical actions performed by players, namely ball control actions, passes, ball carrying, dribbling, tackles, interceptions, and shots on goal, taking into account three modes of coordination complexity (MCC). The first mode of coordination complexity (MCC 1) included technical and tactical actions performed while stationary or at a comfortable movement speed. Actions executed in motion under spatial and temporal constraints were classified as MCC 2. The third mode of coordination complexity (MCC 3) comprised technical and tactical actions performed under active opposition from the opponent. Ball passes were classified as possession-retaining, progressive, and penetrative.

The integral evaluation of the technical and tactical activity of football players consisted of three quantitative and three qualitative specific coefficients (Table 1).

Statistical Analysis

The statistical analysis of the research results was conducted using methods of descriptive mathematical statistics (Byshevets et al., 2019; Bai & Bai, 2021; Jones, 2022). The indicators characterizing the sample were determined, including the arithmetic mean ($\bar{x}$), the standard deviation (S) and the coefficient of variation (V).

The ten-point scale for the integral assessment of the technical and tactical activity of football players was developed based on the three-sigma rule (Vincent, 2005) according to the following algorithm:

Step 1 – determination of the arithmetic mean value of a specific coefficient ($\bar{x}$);

Step 2 – determination of the standard deviation (S);

Step 3 – determination of the range (the difference between the values ($\bar{x}$+3S));

Step 4 – determination of the inter-score interval (ISI):

$$\text{ISI} = \frac{(\bar{x}+3S)-(\bar{x}-3S)}{9}, \quad (8)$$

where 9 is the number of intervals in the ten-point scale (from the 2nd to the 10th score). The value ($\bar{x}$ – 3S) is assigned to the first column of the scale.

Table 1. Integral Evaluation of Football Players' technical and tactical activity

№	Performance-specific coefficients	Formulas	Notes
		Quantitative	
1	Intensity Coefficient	$IC = \frac{\sum_{i=1}^{n} TTA}{t}$, (1)	TTA – technical and tactical actions t – playing time
2	Mobility Coefficient	$MC = \frac{\sum_{i=1}^{n} TTA(2-nd\ MMC+3-rd\ MMC)}{t} \times 2$, (2)	2 – index of coordination complexity and match intensity
3	Aggression Coefficient	$AC = \frac{\sum_{i=1}^{n} TTA(3-rd\ MMC)}{t} \times 3$, (3)	3 – indicator of coordination complexity and game intensity
		Qualitative	
4	Effectiveness Coefficient	$EC = \frac{\sum_{i=1}^{n} executed\ TTA}{\sum_{i=1}^{n} all\ TTA}$, (4)	-
5	Duel Effectiveness Coefficient	$DEC = \frac{\sum_{i=1}^{n} executed\ TTA,\ in\ 3-rd\ MMC}{\sum_{i=1}^{n} all\ TTA,\ in\ 3-rd\ MMC}$, (5)	-
6	Creativity Coefficient	$CC = \frac{\sum_{i=1}^{n} executed\ TTA\ (DP\times1+PP\times2+A\times5+SG\times5+G\times10)}{t}$, (6)	DP – developmental passes; PP – penetrative passes; A – assists (goal-scoring passes); SG – shots on goal; G – goals
7	Integral assessment of a field player's technical tactical activity	IATTA= IC + MC + AC + EC + DEC + CC, (7)	-

Step 5 – construction of the ten-point scale: 1 point – value ($\bar{x}$ – 3S); 2 points – value ($\bar{x}$– 3S) plus one inter-score interval, and so on.

Mathematical processing of the research results was performed using the Data Analysis package of the MS Office Excel software, as well as the Statistica software package.

Results

Modern football tactics involve the classification of players into seven playing positions: goalkeeper, full-back, central defender, defensive midfielder, central midfielder (inside), wide midfielder (winger), and forward (Fig. 1).

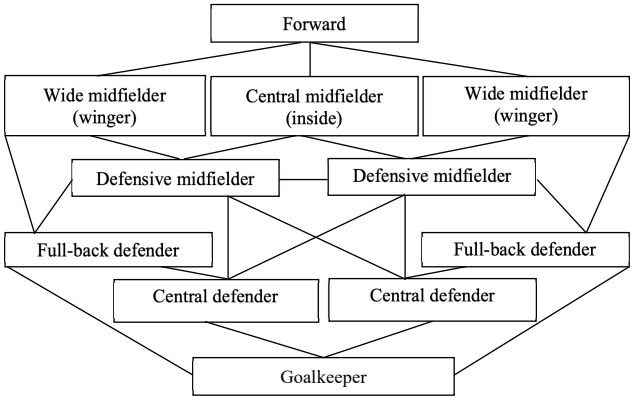

Fig. 1. Tactical formation of a football team (one of the possible variants)

As shown in Table 2, the technical and tactical activity of football players includes ball stops, passes, dribbling, maneuvers, tackles, interceptions, and shots on goal. Ball stops are predominantly performed by full-backs (35.6%) and forwards (35.7%). The highest proportion of passes in the technical and tactical activity structure is contributed by central defenders (47.3%), defensive midfielders (45.3%), wide midfielders/wingers (37.6%), and central midfielders/inside players (33.3%). Dribbling is most frequently performed by central defenders (6.5%), wide midfielders/wingers (5.9%), and central midfielders/inside players (6.1%).

As expected, dribbling is predominantly performed by wide midfielders/wingers (9.9%), central midfielders/inside players (9.4%), and forwards (10.7%).

The analysis of Table 2 highlights the need to specifically characterize the technical and tactical activity of players performing as central defenders. On the one hand, central defenders execute the fewest ball tackles (3.0%), yet on the other hand, they achieve the highest number of interceptions (10.5%). Overall, the greatest involvement in ball tackles is observed among defensive midfielders (8.1%), wide midfielders/wingers (7.1%), and central midfielders/inside players (7.8%).

Interceptions, aside from central defenders, are primarily performed by full-backs (10.1%) and defensive midfielders (9.5%).

Regarding shots on goal, the highest proportion in the technical and tactical activity structure belongs to forwards (4.8%), followed by wide midfielders/wingers (2.1%) and central midfielders/inside players (1.7%).

The primary structural element of a football team's tactical play is passing. Depending on tactical objectives—

Table 2. Structure of technical and tactical activity of highly skilled football players across different playing positions, %

Playing positions	Technical and tactical activity, %						
	ball stops	passes	dribbling	maneuvers	tackles	interception	shots on goal
Full-back defender (n=45)	35.6	39.7	4.1	3.3	6.8	10.1	0.3
Central defender (n=38)	32.1	47.5	5.5	1.5	3.0	10.5	0.1
Defensive midfielder (n=29)	29.1	45.3	3.5	3.1	8.1	9.5	1.4
Wide midfielder (winger) (n=38)	34.8	37.6	5.9	9.9	7.1	2.6	2.1
Central midfielder (inside) (n=35)	29.2	39.3	6.1	9.4	7.8	5.8	1.7
Forward (n=21)	35.7	34.2	4.7	10.7	6.2	3.7	4.8

ball retention, development of attacking actions, and intensification of game situations—passes in this study were categorized as retention, development, and intensifying passes. Figure 2 presents the distribution of these types of passes among highly skilled outfield players across different playing positions.

As shown in Fig. 2, during a football match, the highest proportion of development passes is performed by central defenders (75.7%), defensive midfielders (65.6%), and central midfielders/inside players (61.2%). Undoubtedly, the effectiveness of a football team's play largely depends on intensifying passes, which lead to shots on goal. Among all playing positions, the most intensifying passes are executed by central defenders (9.6%), wide midfielders/wingers (16.5%), central midfielders/inside players (9.7%), and forwards (13.0%).

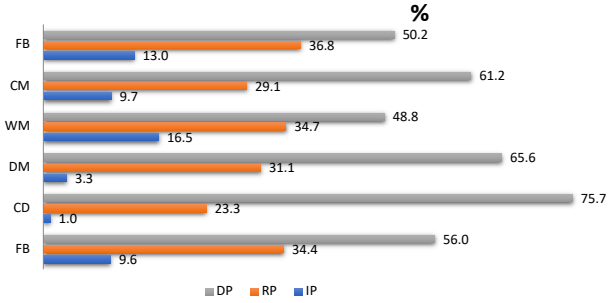

Fig. 2. Distribution of retention (RP), development (DP), and intensifying passes (IP) among highly skilled football players across different playing positions: F – Forward; CM – Central Midfielder (Inside); WM – Wide Midfielder (Winger); DM – Defensive Midfielder; CD – Central Defender; FB – Full-Back

Regarding retention passes, Fig. 2 shows that the largest share is attributed to full-backs (34.4%), wide midfielders/wingers (34.7%), and forwards (36.8%).

During a match, players perform technical and tactical actions under different modes of coordination complexity (MCC). The 1st MCC mainly includes ball stops and retention and development passes. The 2nd MCC involves stops, passes, dribbling, interceptions, and shots on goal. Technical and tactical actions are most challenging for players in the 3rd MCC, which occurs under active opposition pressure or constrained spatial-temporal conditions. These primarily include dribbling, tackles, interceptions, and shots on goal.

As illustrated in Fig. 3, the overall execution of technical and tactical actions considering MCC varies across different positions. The highest share of actions under complex conditions (3rd MCC) is performed by wide midfielders/wingers (34.7%), central midfielders/inside players (33.6%), and forwards (49.9%). Overall, forwards execute almost 50% of their technical and tactical actions in the 3rd MCC, reflecting the specific competitive conditions faced by players in this position.

A considerable share of technical and tactical actions in the 3rd MCC is performed by wide midfielders/wingers (34.2%) and central midfielders/inside players (33.6%). The execution of technical and tactical actions in the 2nd MCC ranges from 61.4% for wide midfielders/wingers to 73.2% for full-backs.

The structure of technical and tactical activity of highly skilled football players across different positions was assessed in conjunction with an integral assessment of their technical and tactical activity (IATTA). The IATTA consists of three quantitative and three qualitative specific coefficients. The quantitative specific coefficients include the intensity coefficient (IC), mobility coefficient (MC), and aggressiveness coefficient (AC). The qualitative specific coefficients comprise the effectiveness coefficient (EC), duel effectiveness coefficient (DEC), and creativity coefficient (CC). The methodology for determining the IATTA is described above (see Table 1).

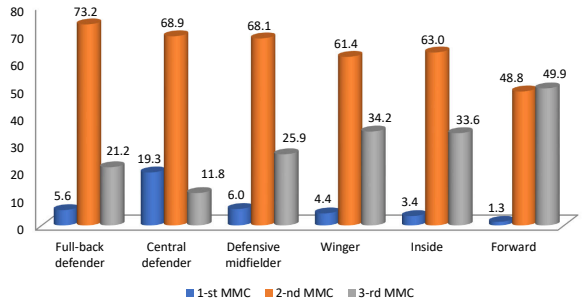

Fig. 3. Distribution of technical and tactical actions performed by highly skilled football players across different playing positions in the 1st, 2nd, and 3rd modes of coordination complexity (MCC)

Each of these specific coefficients characterizes particular aspects of players' technical and tactical performance. Specifically, IC reflects overall player activity and the total number of technical and tactical actions performed. MC indicates player mobility, particularly their execution of technical and tactical actions in the 2nd and 3rd MCC; among all specific coefficients, MC contributes the largest share to the IATTA. AC characterizes player involvement in duels, i.e., technical and tactical actions performed in the 3rd MCC.

Regarding the qualitative indicators of the IATTA, they are determined by the ratio of successfully executed technical and tactical actions to the total number performed.

Table 3. Ten-point scale of integral assessment values of technical and tactical activity of highly skilled football players across different playing positions

Playing positions	Specific coefficients	Level of manifestation of specific indicators									
		low		below average		average		above average		high	
		1	2	3	4	5	6	7	8	9	10
Full back defender, n=76	IC	0.67	0.76	0.84	0.93	1.02	1.11	1.19	1.28	1.37	1.45
	MC	1.39	1.54	1.68	1.83	1.98	2.13	2.27	2.42	2.57	2.71
	AC	0.41	0.45	0.49	0.53	0.57	0.61	0.65	0.69	0.73	0.77
	EC	0.70	0.73	0.76	0.79	0.83	0.86	0.89	0.92	0.95	0.99
	DEC	0.36	0.40	0.44	0.48	0.52	0.56	0.60	0.64	0.68	0.72
	CC	0.19	0.23	0.27	0.32	0.36	0.40	0.44	0.48	0.53	0.57
	IATTA	3.85	4.17	4.49	4.80	5.12	5.44	5.76	6.08	6.39	6.71
Central defender, n=48	IC	0.84	0.93	1.02	1.11	1.21	1.29	1.39	1.48	1.57	1.67
	MC	1.24	1.40	1.56	1.73	1.89	2.05	2.21	2.37	2.54	2.69
	AC	0.29	0.34	0.39	0.44	0.49	0.55	0.60	0.66	0.71	0.77
	EC	0.81	0.83	0.85	0.87	0.89	0.91	0.93	0.95	0.97	0.99
	DEC	0.39	0.44	0.49	0.53	0.58	0.63	0.68	0.73	0.78	0.82
	CC	0.29	0.32	0.35	0.38	0.41	0.44	0.47	0.50	0.53	0.56
	IATTA	3.69	4.13	4.57	5.00	5.46	5.90	6.34	6.78	7.21	7.65
Defensive midfielder, n=31	IC	0.56	0.67	0.78	0.89	1.00	1.12	1.23	1.34	1.45	1.56
	MC	1.39	1.53	1.67	1.80	1.94	2.08	2.22	2.36	2.49	2.63
	AC	0.52	0.59	0.66	0.73	0.79	0.86	0.93	0.99	1.07	1.14
	EC	0.67	0.70	0.74	0.77	0.81	0.84	0.87	0.91	0.94	0.98
	DEC	0.37	0.42	0.47	0.52	0.57	0.62	0.66	0.71	0.76	0.81
	CC	0.24	0.27	0.29	0.32	0.35	0.38	0.41	0.44	0.46	0.49
	IATTA	3.95	4.34	4.72	5.11	5.49	5.89	6.27	6.66	7.04	7.43
Wide midfielder (winger) n=49	IC	0.58	0.67	0.76	0.86	0.95	1.04	1.14	1.23	1.32	1.41
	MC	1.34	1.48	1.61	1.75	1.88	2.02	2.15	2.29	2.42	2.56
	AC	0.46	0.57	0.68	0.79	0.90	1.01	1.12	1.23	1.34	1.45
	EC	0.69	0.72	0.76	0.79	0.82	0.86	0.89	0.92	0.95	0.99
	DEC	0.46	0.51	0.56	0.60	0.65	0.69	0.74	0.79	0.83	0.88
	CC	0.22	0.26	0.31	0.35	0.39	0.44	0.48	0.52	0.56	0.61
	IATTA	4.04	4.43	4.82	5.21	5.60	5.99	6.38	6.77	7.16	7.55
Central midfielder (inside) n=39	IC	0.68	0.75	0.82	0.89	0.97	1.05	1.12	1.19	1.27	1.34
	MC	1.22	1.41	1.60	1.79	1.98	2.17	2.36	2.55	2.74	2.93
	AC	0.49	0.59	0.70	0.79	0.91	1.01	1.11	1.21	1.31	1.42
	EC	0.65	0.69	0.72	0.76	0.79	0.83	0.87	0.90	0.94	0.97
	DEC	0.33	0.38	0.43	0.47	0.52	0.57	0.62	0.66	0.71	0.76
	CC	0.24	0.28	0.32	0.37	0.41	0.45	0.49	0.53	0.58	0.62
	IATTA	4.21	4.53	4.85	5.17	5.49	5.82	6.14	6.46	6.78	7.11
Forward	IC	0.40	0.45	0.49	0.54	0.58	0.63	0.68	0.72	0.77	0.81
	MC	0.74	0.85	0.97	1.08	1.19	1.31	1.42	1.54	1.65	1.77
	AC	0.50	0.61	0.72	0.84	0.95	1.06	1.17	1.28	1.39	1.50
	EC	0.50	0.54	0.56	0.62	0.66	0.70	0.74	0.78	0.82	0.86
	DEC	0.35	0.40	0.45	0.55	0.56	0.61	0.66	0.71	0.76	0.82
	CC	0.16	0.19	0.22	0.25	0.28	0.31	0.34	0.37	0.40	0.42
	IATTA	2.59	3.03	3.46	3.89	4.33	4.77	5.21	5.64	6.08	6.51

These qualitative specific coefficients of the IATTA reflect the level of a player's sporting mastery.

To establish a hierarchy among players in different positions, a ten-point scale of IATTA values for highly skilled football players across various playing positions was developed in this study (Table 3).

The ten-point scale enables the development of graphical models of the IATTA for players in specific positions during a match.

For example, Fig. 4 presents the graphical models of the IATTA for the defensive midfielder of the England national team, Declan Rice, during the final matches of the UEFA European Championship: England vs. Italy in 2021 and England vs. Spain in 2024.

Discussion

The study of specific aspects of athletes' preparedness is determined by the structure of their training within the framework of organized training processes (Kostiukevych et al., 2020; Leibo et al., 2021; Adamchuk et al., 2023). Analyzing the competitive performance of highly skilled athletes

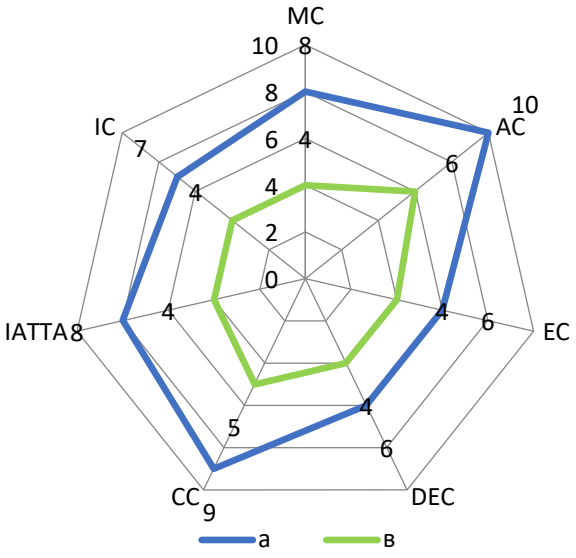

Fig. 4. Graphical model of technical and tactical activity of the defensive midfielder of the England national team in the UEFA European Championship finals: England vs. Italy (a) and England vs. Spain (b): IC – Intensity Coefficient; MC – Mobility Coefficient; AC – Aggressiveness Coefficient; EC – Effectiveness Coefficient; DEC – Duel Effectiveness Coefficient; CC – Creativity Coefficient; IATTA – Integral Assessment of Technical and Tactical Activity

allows for targeted training interventions that account for their specific technical and tactical actions. For team sport athletes, including football players, it is essential to consider functional responsibilities depending on their playing positions (Shchepotina et al., 2019; Hatem et al., 2020; Lima et al., 2021).

Our research was conducted over two UEFA European Championships in 2021 and 2024. This allowed us to determine the structure and integral assessment of technical and tactical activity of highly skilled football players in different playing positions during the most prestigious competitions. Moreover, the results are based on a sufficiently large number of observations ($n > 40$), which allows the derived indicators of technical and tactical activity structure and integral assessment to be considered as model benchmarks (Shchepotina et al., 2021; Mitova, 2022; Perepelytsia et al., 2026). These indicators can serve as a basis for comparative analysis of the competitive performance of highly skilled players in different positions across both club and national teams.

It is noteworthy that our study not only supplements previous findings on this topic (Kostiukevych et al., 2022, 2023) but also presents new results.

Primarily, this concerns the ten-point scale of specific coefficients of the integral assessment of technical and tactical activity for highly skilled football players in various positions. Based on this scale, both the level of players' technical and tactical activity and graphical models of technical and tactical activity can be constructed (Konnov, 2021; Mezhvynskyi, 2024).

The considerable share of technical and tactical actions performed in the 3rd MCC by wide midfielders/wingers and central midfielders/inside players is explained by the fact that players in these positions, along with forwards, primarily perform technical and tactical actions in the third zone of the pitch, which is characterized by limited playing space (Arjol-Serrano et al., 2021; Karpa et al., 2021).

In the 2nd MCC, the majority of technical and tactical actions are executed during the match. This reflects the competitive level of the football team: the higher the match tempo, the fewer actions are performed in the 1st and 3rd MCC (Kostiukevych et al., 2022, 2023).

According to the results, ball stops, as one of the main components in the structure of technical and tactical activity, are predominantly performed by full-backs and forwards. For full-backs, this is associated with the need for quick ball reception during flank attacks or intercepting passes, whereas for forwards, it is related to ball control in the attacking zone or aerial duels. The primary role of passes in the technical and tactical activity structure for central defenders, defensive midfielders, wide midfielders, and central midfielders reflects their key function in constructing and organizing game schemes. The central and defensive midfielders' role aligns with modern football concepts, where ball distribution often begins from deep positions. Regarding dribbling, its share in the technical and tactical activity structure depends on players' specific game tasks. For defenders, dribbling often serves as the initiation of an attack or repositioning for a better passing option, whereas for wingers and inside midfielders, it is an important tool to overcome opponents, create numerical superiority on the flank, or advance the ball into the penalty area. These results correspond with the general principles of positional play and can serve as a foundation for further studies examining the effectiveness of technical and tactical actions execution in various game situations and match phases (Papadopoulos et al., 2023; Soroka et al., 2023; Goranović et al., 2024).

In conclusion, this study provides a timely response to theoretical and practical demands in football regarding the preparation of highly skilled players.

Conclusions

1. The structure of technical and tactical activity of highly skilled football players in different playing positions—full-back, central defender, defensive midfielder, central midfielder (inside), wide midfielder (winger), and forward—has been established. In particular, ball stops are most characteristic of full-backs (35.6%), wide midfielders/wingers (34.8%), and forwards (35.7%). Passes are predominantly executed by central defenders (47.5%) and defensive midfielders (45.3%).

The proportions of dribbling, maneuvers, tackles, and interceptions for each playing position are significantly lower than those of ball stops and passes. Dribbling ranges from 3.5% for defensive midfielders to 6.1% for central midfielders (inside). Maneuvers are most frequently performed by wide midfielders/wingers (9.9%), central midfielders/inside players (9.4%), and forwards (10.7%). Tackles are primarily executed by defensive midfielders (8.1%), wide midfielders/wingers (7.1%), and central midfielders/inside players (7.8%). Interceptions are most common among full-backs (10.1%), central defenders (10.5%), and defensive midfielders (9.5%). Shots on goal are mainly performed by central midfielders/inside players (1.7%), wide midfielders/wingers (2.1%), and forwards (4.8%).

2. The developed integral assessment of technical and tactical activity enables a targeted analysis of players' performance during both ball possession and ball recovery phases. It comprises three quantitative coefficients—intensity, mobility, aggressiveness—and three qualitative coefficients—effectiveness, duel effectiveness, and creativity.

3. Based on the ten-point scale of technical and tactical activity for highly skilled players in various positions, the level of sporting mastery exhibited during the game can be determined, and graphical models of their competitive performance can be constructed.

The prospects for further research are linked to determining the structure and integral assessment of technical and tactical activity in both club and national teams of high competitive level.

Ethics Approval

The study was approved by the Ethics Committee of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, and all procedures were conducted in accordance with the Declaration of Helsinki.

Informed consent

Not applicable.

Data Availability Statement

Data are available from the authors upon reasonable request.

AI Transparency Statement

The authors did not use artificial intelligence-based tools in the preparation of this manuscript.

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Conflict of Interest

The authors declare no conflict of interest.

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Структура та інтегральна оцінка техніко-тактичної діяльності висококваліфікованих футболістів різних ігрових амплуа

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Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 9 с., 3 табл., 4 рис., 36 джерел.

Мета дослідження – на основі системного підходу визначити структуру й інтегральну оцінку техніко-тактичної діяльності висококваліфікованих футболістів різних ігрових амплуа.

Матеріал і методи. Дослідження проводилося упродовж чемпіонатів Європи з футболу 2021 та 2024 років. Аналізувалася змагальна діяльність футболістів, які входили до складу національних збірних команд Англії, Іспанії, Італії, Данії, Нідерландів, Словаччини, Бельгії, Румунії, Словенії, Австрії, Швейцарії, Швеції, Північної Македонії, Сербії та України. У дослідженні використовувалися такі методи: теоретичний аналіз джерел та літератури, педагогічне спостереження, відеоаналіз змагальної діяльності, методи математичної статистики.

Результати. Визначено структуру техніко-тактичної діяльності висококваліфікованих футболістів різних ігрових амплуа – крайнього захисника, центрального захисника, опорного півзахисника, центрального півзахисника (інсайда), крайнього півзахисника (вінгера) та нападника. Встановлено, що виконання зупинок, передач, введення, обведення, відборів, перехватів м›яча та ударів у ворота для цих ігрових амплуа є нерівнозначним, що характеризує специфічні особливості їх змагальної діяльності.

Висновки. Визначені показники структури та інтегральної оцінки техніко-тактичної діяльності висококваліфікованих футболістів різних ігрових ампула дозволяють більш ефективно здійснювати управлінські впливи у тренувальному та змагальному процесах футбольних команд.

Ключові слова: чемпіонат Європи з футболу, системний підхід, режими координаційної складності, специфічні коефіцієнти, управлінські впливи.

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