DOI: https://doi.org/10.37547/mesmj-V6-I3-30 Pages: 261-271

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL

http://mentaljournal-jspu.uz/index.php/mesmj/index

ASSESSMENT OF THE STRUCTURAL FEATURES OF COMPETITIVE ACTIVITIES IN YOUNG FOOTBALL PLAYERS AGED 13–17

Farkhod Ravshanovich Makhamadjonov
State University of Physical Education and Sports of Uzbekistan Tashkent
E-mail: Farhod_85_1985_25@mail.ru
Tashkent, Uzbekistan

ABOUT ARTICLE

Key words: competitive performance, technical-tactical preparation, individualized tactical development.

Received: 16.05.25
Accepted: 18.05.25
Published: 20.05.25

Abstract: The article investigates methodological frameworks for evaluating the technical and tactical performance of young football players within the context of competitive activity. Particular emphasis is placed on the systematic analysis of temporal distribution in the training curriculum of the Specialized Children and Youth Sports School of the Olympic Reserve (SDYUSHOR) dedicated to the acquisition and refinement of technical and tactical competencies. The study delves into the formulation of assessment criteria, the implementation of quantitative and qualitative evaluation methodologies, and their applied significance in performance monitoring, training load optimization, and the enhancement of competitive effectiveness in youth football.

Introduction

Competitive activity (CA) serves as a fundamental determinant of the quality and efficiency of an athlete's training and performance. It represents a complex system of interactions that encompass technical, tactical, psychological, and physiological components,

ultimately shaping an athlete's overall effectiveness in a given sport. The systematic study of the underlying patterns governing competitive confrontations should be a focal point of scientific inquiry. A comprehensive understanding of these patterns would significantly contribute to the optimization of the training process, providing a scientific basis for enhancing sports performance, structuring rational training methodologies, and developing strategies for athlete management, particularly in the preparatory phase leading up to major competitions (1, 2, 3, 4).

Despite the significant role that competitive activity plays in sports science, there remains a distinct lack of empirical data concerning the age-related dynamics of structural elements within the competitive activity of young football players. This knowledge gap hinders the development of specialized methodologies aimed at enhancing the technical and tactical training of youth footballers. Without a clear understanding of how competitive performance evolves with age, it becomes challenging to establish a structured and progressive training system that aligns with the physiological, cognitive, and motor development stages of young athletes.

Scientific studies have established that technical and tactical skills serve as the cornerstone of football performance. The ability to execute precise technical actions in dynamic competitive settings, combined with the cognitive ability to make informed tactical decisions under pressure, is what differentiates elite athletes from their less proficient counterparts. However, existing training programs often fail to take into account the sequential and age-appropriate development of these skills. As a result, youth football players may experience difficulties in transitioning to professional levels, as they may lack the foundational technical proficiency and tactical awareness required for high-level performance.

A more structured and research-driven approach is needed to bridge this gap. This involves identifying key performance indicators (KPIs) associated with technical and tactical execution at different stages of athletic development, establishing validated assessment methods, and integrating these insights into structured training regimens. By adopting a scientifically rigorous approach to CA analysis, coaches and sports scientists can design age-specific training protocols that enhance both individual and team performance.

Moreover, the interplay between technical execution and tactical intelligence must be thoroughly examined in the context of competitive demands. Tactical flexibility, decision-making speed, and situational awareness are critical attributes that must be systematically cultivated throughout an athlete's developmental years. The absence of standardized methodologies for evaluating and training these attributes creates a significant challenge in fostering long-term athlete development (LTAD).

Another important aspect is the role of psychological resilience and cognitive adaptability in competitive settings. Youth football players must not only develop technical and tactical competencies but also cultivate mental attributes such as concentration, stress management, and strategic adaptability. Research indicates that the integration of cognitive training within football-specific drills enhances decision-making speed and situational assessment, both of which are crucial for competitive success.

In conclusion, the relevance of studying competitive activity in young football players extends beyond the immediate implications for performance enhancement. It provides a foundation for the long-term development of athletes, ensuring that they acquire the necessary skills, decision-making abilities, and psychological attributes essential for high-performance competition. Future research should focus on longitudinal studies that track the progression of technical and tactical competencies across different age groups, thereby facilitating the design of scientifically substantiated training models that optimize athlete development at every stage of their career.

Materials and methods

Purpose of the Study. The purpose of this study is to analyze the structural components of competitive activity in young football players and evaluate their impact on technical and tactical performance.

Research Methods. The study employs a systematic approach to data collection and analysis, utilizing the most effective methodology for evaluating competitive activity in football—the registration of structural-dynamic (SD) elements through observational analysis. This involves the systematic recording of key technical and tactical actions (TTA) via audio dictation, followed by subsequent transcription into a standardized protocol form. The collected data may also be subjected to graphical representation, enabling a thorough

quantitative and qualitative assessment of both individual player performance and overall team efficiency.

The methodology focuses on documenting the most indicative TTA that serve as benchmarks for evaluating competitive performance. These indicators are assessed in terms of frequency (quantitative volume) and efficiency (percentage of errors or performance coefficients), both at the individual and team levels. The accuracy and reliability of the data are further ensured through comparative validation against video recordings of actual match scenarios. The margin of error in these assessments should not exceed 10-12%, ensuring a high degree of precision in performance evaluation.

By implementing this structured methodology, the study aims to generate empirical insights into the development of technical and tactical competencies in youth football players, thereby contributing to the formulation of evidence-based training models that enhance competitive readiness and long-term athletic progression.

Result and discussion

Research results and its discussion: In football theory and methodology, various parameters and indicators are used to assess structural-dynamic (SD) elements, including the number and efficiency of shots on goal (including headers), passing accuracy, dribbling success, ball recovery, duels won (both aerial and ground), as well as the number of team combinations and the number of players involved in them.

To determine the significance of these SD indicators in training young football players aged 13–17, a survey was conducted among football experts, coaches, and educators. A total of 72 specialists with at least 10 years of professional experience participated in the study.

The survey explored multiple aspects, including the importance of SD elements in player development. The analysis of the collected responses allowed for the identification of the most significant SD elements, which were ranked based on their perceived importance (Table 1).

Table-1

The importance of SD indicators in the preparation of young football players aged 13-17 years (based on the results of a questionnaire survey) n = 72

No.	Name of the element SD	Number of respondents	%
1.	Kicks and headers on goal	59	81.9
2.	Ball passes	55	76.3
3.	Dribbling (feints), dribbling	44	61.1
4.	Stopping the ball	42	58.3
5.	Technique of movement without a ball	34	47.2
6.	Dribbling	52	72.2
7.	Taking the ball (interception)	50	69.4
8.	Heading technique	22	30.5
9.	Effectiveness of group interactions	12	16.7
10.	Implementation of standard provisions	14	19.4
11.	Throw-in (out)	9	12.5

Results of the Study. The findings indicate that, according to the surveyed coaches, the most critical technical and tactical actions (TTA) in football include shots on goal (81.9%), various types of passing (76.3%), ball control (72.2%), and ball tackling (69.4%). These fundamental components constitute the core of football performance, which justifies their prioritization in training methodologies.

It is noteworthy that, as reported by experts, professional football players at the international level commit errors in up to 70% of these technically demanding actions. This statistic highlights the necessity of refining skill acquisition strategies at the developmental stages to enhance performance consistency at higher competitive levels.

Surprisingly, dribbling and feinting techniques were ranked lower than expected, with only 61.1% of surveyed coaches emphasizing their importance. Given that childhood and adolescence are critical periods for developing individual playing style and creativity, neglecting these techniques may lead to homogenized skill sets among professional teams. Failure to adequately develop these elements at a young age could ultimately reduce the technical diversity and effectiveness of elite football squads.

Another area of concern is heading techniques, which received significantly less emphasis (30.5%). This could be a contributing factor to the persistent weakness of national teams in aerial duels at the international level. Addressing this gap in training programs could enhance performance in set-piece situations and overall tactical efficiency.

A substantial majority of the surveyed coaches (62 specialists, or 86.1%) emphasized the necessity of structuring technical and tactical training according to the age-related physiological and cognitive characteristics of young players. To further investigate the structural-dynamic (SD) elements of competitive activity in youth football, we conducted pedagogical observations of matches involving players aged 13 to 17.

Systematic performance monitoring is essential within the training process, requiring precise numerical indicators to evaluate player development at each stage. Observational analysis is particularly effective when assessing TTA in competitive conditions, providing insights into skill acquisition, retention, and areas requiring further reinforcement. At the foundational training stage, these data serve as diagnostic tools for measuring both proficiency and gaps in technical execution. During the advanced training phase, expanded performance metrics facilitate comprehensive evaluations of skill mastery. Such a feedback-driven approach enhances the efficiency of training systems, directly impacting the competitive success of club and national teams.

For this study, SD elements were registered during official youth football matches held in the Tashkent and Uzbekistan championships. A total of over 80 matches were analyzed. Key performance metrics included the frequency and accuracy of short, medium, and long passes, ball control efficiency, dribbling success, ball retrieval, interceptions, one-on-one duels, shots on goal, and ball losses. Table 2 presents the average percentage values of these indicators per match.

Data analysis from Table 2 indicates that young football players aged 13–17 execute, on average, between 380 and 520 ball-related actions per match. A detailed examination of TTA dynamics reveals that for 13-year-olds, short and medium backward or lateral passes account for the lowest proportion of total passes at 8±1.5%. However, this indicator increases with age, reaching 15±4% among 17-year-olds. This trend suggests a growing emphasis on tactical ball circulation as players mature, reinforcing the importance of age-adapted training strategies that align with evolving tactical awareness and technical proficiency.

Table -2

The significance of SD indicators of young football players aged 13-17 years completed on average per match (%)

No.	Name of SD indicators	$\overline{X} \pm \delta$				
		Age (years)				
		13	14	15	16	17
1	Number of short and medium back and side passes	8±1.5	10±4	10±2.5	12±3	15±4
	Efficiency of short and medium backward and cross passes	0.5±0.08	0.6±0.07	0.6±0.04	0.6±0.03	0.7±0.1
2	Number of short and medium forward gears	16±3	17±4	17±3	18±3	19±4
	Efficiency of short and medium forward passes	0.4±0.05	0.4±0.04	0.5±0.06	0.6±0.08	0.7±0.15
3	Number of long passes	6±1.0	4±0.8	3±0.8	2±0.5	3±0.2
	Long Pass Efficiency	0.2±0.04	0.25±0.04	0.3±0.04	0.35±0.04	0.45±0.06
4	Number of shots	2.8±0.4	3.6±0.4	3.5±0.4	4±0.6	6±0.8
	Efficiency shooting	0.15±0.02	0.18±0.03	0.2±0.03	0.3±0.05	0.45±0.08
5	Dribbling	14±3	15.2±2	10.5±2	12±2	10.5±2
6	Outline	8.2±2	6±1.5	7.4±2	7±2	6.5±1
7	Interception of the ball	9±2	7±2	10.2±2	6.4±2	8±1.5
8	Ball retrieval	10±1.5	12±2	11±2	11±1.5	10±2
9	Martial arts down	7.2±2,	8±1	6.8	6±2	5±1.5
	on top	1.4±0.4	2±0.4	2±0.3	4±0.4	5±1
10	Number of Headings	2±0.8	2.5±0.6	3±0.8	4±0.6	5.8±0.8
	Heading efficiency	0.3±0.04	0.32±0.04	0.34±0.04	0.4±0.06	0.55±0.08
11	Number of kicks on goal	4.6±0.4	5.5±0.8	5±1	6±1.5	6.5±2
	Efficiency of kicking the goal	0.3±0.08	0.3±0.1	0.4±0.1	0.45±0.1	0.6±0.2
12	Number of headers on goal	2±0.2	2±0.6	2±0.5	4±0.5	4.2±0.6
	Header Shot Efficiency	0.18±0.04	0.2±0.04	0.3±0.04	0.35±0.05	0.45±0.06
13	Loss of ball	8±1	6±2	4.6±0.6	4±0.5	2.5±0.5

This phenomenon, in our opinion, is due to the fact that these actions correlate with the indicator of tactical thinking, which, as is known, depends on the age and qualification of the athlete. In reality, a young football player who is just starting to participate in competitions, upon receiving the ball in a game situation, primarily strives to deliver it to the opponent's half

of the field as quickly as possible by any means. However, they do not yet realize that in some cases, in order to maintain ball possession, it is advisable to pass sideways or backward. Therefore, with age, the percentage of such passes increases, reaching its peak among 17-year-old players.

As for forward passes, the difference here is insignificant, although there is a tendency toward an increase in this indicator. For 13-year-old players, it stands at 19±4%. In general, the quantitative and qualitative characteristics of short and medium passes in various directions increase as footballers grow older. This is quite natural since passing the ball is a fundamental element of team play, and coaches pay special attention to developing this technical-tactical action (TTA) during the training process.

At the same time, if we examine the quality of long passes, the situation is diametrically opposite. The highest percentage (6±10%) is observed among 13-year-old players, while in 16-17-year-olds, this figure decreases to 2±0.5% and 3±0.2%, respectively. This is likely due to the fact that beginner football players, who have not yet mastered the techniques and tactics of the game, more often resort to a "clearance" strategy, trying to kick the ball as far away from their goal as possible. That is why the number of long passes prevails among younger players. However, with age, as game experience accumulates, footballers use this technical action more consciously, depending on the tactical context. This is also confirmed by the efficiency coefficient—the older the player, the higher the effectiveness of their actions.

Let us also consider ball control and dribbling. As is well known, these elements of play have traditionally been considered priority characteristics in the perception of young football players. They believe that the longer a player controls the ball and demonstrates dribbling skills, the higher their individual mastery and authority in the team. Therefore, they are often reluctant to part with the ball. However, analysis shows that as players grow older, the frequency of performing these technical actions decreases, while the number of collective interactions, particularly passing, increases.

In this regard, it seems appropriate to take a dual approach when organizing the training process. On the one hand, it is necessary to develop and reinforce team interaction skills, and on the other hand, even in childhood, to encourage and cultivate individual mastery rather than suppress it. The future of football and the level of team performance are determined by a

reasonable balance between individual and team actions. Thus, an optimal combination of individual technique and tactical awareness forms the foundation for successful athlete performance at the competitive level.

As for interceptions and ball retrievals, the percentages across age groups are distributed approximately equally, with a difference of only 1–2%. This phenomenon can be explained as follows: as noted earlier, young 13-year-old players often rely on a "tackling" approach and exhibit a high percentage of ball rejections (see table). Compared to older players, they are forced to engage in more physical challenges to regain possession. Meanwhile, their older counterparts execute ball retrievals more consciously, aiming to swiftly regain possession and disrupt the opponent's initiative.

The indicator for the number of headers aligns with survey data. It was noted that youth coaches devote insufficient attention to heading technique during training sessions, often due to specific concerns. Consequently, the percentage of headers remains significantly lower compared to other technical actions. In competitive matches, the frequency and effectiveness of headers among younger footballers amount to 2±0.8. As they mature, this percentage increases, reaching 5.8±0.8 at 17 years old. Nevertheless, the overall occurrence remains low.

The influence of shot quantity and accuracy on the entertainment value and effectiveness of the game is self-evident. Therefore, it is no coincidence that, according to the survey, coaches ranked shooting as the most critical technical action. Presumably, training exercises in this aspect receive appropriate attention. Consequently, the distribution of shooting attempts is relatively consistent across all age groups. However, shooting efficiency remains low. This suggests that training should not only emphasize shot frequency but, more importantly, ensure that exercises closely simulate real match conditions.

It should be noted, however, that these performance indicators were determined through the analysis of football matches in domestic championships in Tashkent and the Republic of Uzbekistan. When young Uzbek footballers competed against international opponents, specifically from Russia, Ukraine, and Belarus, the performance level of SD indicators for our teams dropped significantly to 25–30% ($P<0.01$).

The analysis of young footballers' SD indicators also revealed that the effectiveness of collective tactical actions—such as pressing, counter-pressing, group challenges, and numerical

superiority in key areas of the field—remains critically low. These actions require high functional capabilities and technical reliability at high speed under conditions of active resistance and time constraints. Additionally, quick transitions between defense and attack, as well as instantaneous shifts from defensive to offensive play, are virtually absent. This issue is particularly pronounced among older age groups (16–17 years old). It is no coincidence that Uzbekistan's senior club and national teams often lag behind foreign teams in these aspects during international competitions.

Our analysis of youth football training programs at SDYUSHOR revealed that these programs outline student development objectives and include educational content aimed at enhancing physical, technical, tactical, and theoretical preparation. These programs also provide structured schedules for covering the training material. However, in our opinion, the allocation of training hours among different types of preparation is not entirely optimal.

Conclusions: At the initial stage of training, insufficient time is allocated to mastering technical skills directly related to prolonged ball control, such as ball handling, dribbling, feints, and various types of passes. The exercises are primarily conducted in conditions without spatial and temporal constraints.

There is no prioritization in the development of technical and tactical skills based on the age-related dynamics of football players, nor is there sufficient consideration of sensitive periods of their physical development. Moreover, there is a lack of training methodologies aimed at developing various physical qualities that directly influence technical proficiency in the game.

There is also an absence of a structured connection between the components of training and competitive activities with the content of technical preparation in the curriculum of SDYUSHOR.

Furthermore, minimal attention is devoted to individual tactical training programs, ball recovery using collective strategies, game management, heading techniques, and the development of tactical thinking among players.

This situation necessitates a more in-depth study of the physical development characteristics of young football players, as well as the dynamics of their general and

specialized physical fitness and performance across different phases of the annual training cycle.

References:

1. Reilly, T., Williams, A. M., Nevill, A., & Franks, A. (2000). A multidisciplinary approach to talent identification in soccer. Journal of Sports Sciences, 18(9), 695-702. https://doi.org/10.1080/02640410050120041

2. Vaeyens, R., Lenoir, M., Williams, A. M., & Philippaerts, R. M. (2008). Talent identification and development programmes in sport. Sports Medicine, 38(9), 703-714. https://doi.org/10.2165/00007256-200838090-00001

3. Bloomfield, J., Polman, R., & O'Donoghue, P. (2007). Physical demands of different positions in FA Premier League soccer. Journal of Sports Science & Medicine, 6(1), 63-70. https://www.jssm.org/hf.php?id=210

4. Kelso, J. A. S. (1995). Dynamic Patterns: The Self-Organization of Brain and Behavior. MIT Press. pp. 120-145.

5. Williams, A. M., & Hodges, N. J. (2005). Practice, instruction and skill acquisition in soccer: Challenging tradition. Journal of Sports Sciences, 23(6), 637-650. https://doi.org/10.1080/02640410400021328