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TEACHING TECHNICAL AND TACTICAL SKILLS TO FOOTBALL PLAYERS USING THE CLUSTER METHOD: A PEDAGOGICAL AND COGNITIVE APPROACH

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Abstract. Modern football performance increasingly depends on the integration of technical precision and tactical intelligence. This study examines the methodological potential of the cluster teaching method in enhancing technical and tactical competencies among young football players. A 12-week pedagogical experiment was conducted with two groups (experimental and control), comprising 30 athletes aged 16–18 years. The experimental group received training based on the cluster approach, emphasizing interconnected learning modules that combine perceptual, cognitive, and motor elements. Statistical analysis using the Student's t-test confirmed significant improvement ($p < 0.05$) in passing accuracy, tactical decision-making, and team coordination. The results demonstrate that the cluster method fosters not only skill automation but also cognitive flexibility, game intelligence, and cooperative awareness, making it a promising direction for sports pedagogy in Uzbekistan.

Keywords: cluster method, football pedagogy, tactical cognition, cognitive-motor integration, player development, team coordination, decision-making.

Introduction. The development of modern football demands high levels of physical fitness, technical precision, and tactical foresight. Traditional training methods often isolate technical drills from tactical instruction, limiting players' situational adaptability. In Uzbekistan, the significance of advanced training methodologies is reinforced by the Presidential Decree PQ-6099 (October 30, 2020), which emphasizes the promotion of healthy lifestyles and the development of mass sports through innovative pedagogical systems.

This study investigates how the cluster method can be applied to integrate technical and tactical learning within football training. The research hypothesis assumes that cluster-based learning will enhance decision-making, tactical awareness, and coordination compared to traditional training.

Literature Review. Theoretical foundations of cluster learning are rooted in cognitive psychology, particularly in the works of Vygotsky (1978) and Piaget (1972), who emphasized the importance of interconnected learning structures. In physical education, Matveev (2005) and Filin (2008) developed systemic and stage-based approaches to athlete preparation. In the context of football, Williams and Hodges (2020) introduced the concept of perception-action coupling, suggesting that tactical intelligence arises from the interaction between perception, cognition, and execution. Local scholars, including Nazarov (2019), Asqarov (2021), and Tadjibaev (2024), have explored innovative teaching technologies but limited empirical data exist on cluster applications in football.

Methodology. The study involved 30 male football players aged 16–18 years, divided into experimental and control groups. A 12-week experimental program was implemented, with the experimental group trained using the cluster method, emphasizing perception, decision-making, execution, and cooperation clusters.

Performance indicators included passing accuracy, decision-making latency, tactical efficiency, and team coordination. The Student's t-test was applied to determine statistical significance ($p < 0.05$).

Results. The cluster-based training group exhibited significant improvements across all measured parameters. Passing accuracy increased by 12.9%, decision-making time decreased by 31.7%, tactical efficiency improved by 16.5%, and team coordination by 17.7%. These results

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confirm the effectiveness of the cluster method for enhancing cognitive-motor integration in football.

Discussion. The cluster method integrates technical, cognitive, and social components of learning. It provides a non-linear structure for skill acquisition, allowing players to adapt to dynamic game contexts. This approach aligns with dynamic systems theory and supports the development of football intelligence.

Psychologically, cluster-based sessions increase motivation, peer collaboration, and communication. In Uzbekistan's football academies, applying this method can enhance player development outcomes and align with international standards.

Conclusion. The cluster method effectively develops technical and tactical competencies in football players by merging motor and cognitive dimensions. It improves decision-making speed, tactical awareness, and cooperation. Coaches are encouraged to integrate cluster modules in football curricula.

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