

Imants Bleidelis

ORCID 0009-0007-0179-9220

An Innovative Game Format  
for the U13 Age Group in  
the Latvian Boys' Youth  
Football Championship

Summary of the Doctoral Thesis for obtaining  
the scientific degree “Doctor of Science (*PhD*)”

Sector Group – Medical and Health Sciences

Sector – Health and Sports Sciences

Sub-Sector – Sports Pedagogy

Riga, 2026

The Doctoral Thesis was developed at Rīga Stradiņš University, Latvia

Supervisor of the Doctoral Thesis:

*Dr. paed.*, Associate Professor **Signe Luika**,  
Rīga Stradiņš University, Latvia

Scientific Advisors:

*Dr. paed.*, Professor **Andra Fernāte**,  
Rīga Stradiņš University, Latvia

*Dr. paed.*, Associate Professor **Irēna Upeniece**,  
Rīga Stradiņš University, Latvia

*Dr. psych.*, Associate Professor **Aleksandrs Koļesovs**,  
University of Latvia

*Dr. paed.*, Leading Researcher **Behnam Boobani**,  
University of Latvia

Official Reviewers:

*Dr. paed.*, Professor **Žermēna Vazne**,  
Rīga Stradiņš University, Latvia

*Dr. sc. admin.*, Associate Professor **Ilvis Ābelkalns**,  
University of Latvia

*PhD.*, Associate Professor **Artur Litwiniuk**,  
Józef Piłsudski University of Physical Education in Warsaw, Poland

Chair of the Doctoral Committee:

*Dr. paed.*, Associate Professor **Kalvis Ciekurs**,  
Rīga Stradiņš University, Latvia

Members of the Doctoral Committee:

*Dr. paed.*, Professor **Juris Grants**,  
Rīga Stradiņš University, Latvia

*Dr. paed.*, Associate Professor **Inta Bula-Biteniece**,  
Rīga Stradiņš University, Latvia

*Dr. paed.*, Professor **Žermēna Vazne**,  
Rīga Stradiņš University, Latvia

*Dr. paed.*, Assistant Professor **Renārs Līcis**,  
Rīga Stradiņš University, Latvia

Defence of the Doctoral Thesis will take place at the public session of the Promotion Council of Health Sciences on 24 August 2026 at 13.00 in the Hippocrates Lecture Theatre, 16 Dzirciema iela, Rīgas Stradiņš University

The Doctoral Thesis is available in RSU Library and on RSU website:  
<https://www.rsu.lv/en/dissertations>



The research is carried out within the framework of the European Union Recovery and Resilience Mechanism Plan and the state budget funded project “RSU internal and RSU with LASE external consolidation” No. 5.2.1.1.i.0/2/24/I/CFLA/005, implemented under Doctoral Grant

## Table of Contents

|                                                                            |    |
|----------------------------------------------------------------------------|----|
| Abbreviations used in the Thesis .....                                     | 5  |
| Introduction .....                                                         | 6  |
| Aim of the Thesis .....                                                    | 9  |
| Objectives of the Thesis .....                                             | 9  |
| Research Methods .....                                                     | 9  |
| Hypothesis of the Thesis .....                                             | 9  |
| Novelty of the Thesis.....                                                 | 10 |
| The influence of game formats on the development of footballers.....       | 11 |
| Conclusions .....                                                          | 16 |
| Proposals .....                                                            | 19 |
| List of publications, reports and patents on the topic of the Thesis ..... | 21 |
| References .....                                                           | 22 |

### **Abbreviations used in the Thesis**

|      |                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------|
| FIFA | International Association Football Federation; in French: <i>Fédération Internationale de Football Association</i> |
| LFF  | Latvian Football Federation; in Latvian: <i>Latvijas Futbola federācija</i>                                        |
| RSU  | Rīga Stradiņš University; in Latvian: <i>Rīgas Stradiņa universitāte</i>                                           |
| UEFA | Union of European Football Associations                                                                            |

## Introduction

Football is often referred to as the king of sports – it is a global game that knows no national borders. It is played across all continents, where competitions of various levels regularly take place: from friendly matches and regional tournaments to world championships and cup competitions (Rubenis, 2006). Due to the game's uniqueness and the unpredictability of its outcomes, football attracts millions of spectators, having evolved over time from a simple sport into an influential social movement.

According to Uldis Ulmanis (2010), the origins of football in Latvia date back to 1907. At that time, English employees from Riga's factories, particularly the "Salamandra" plant, founded the first football team – the British Football Club. Initially, the team had no playing partners other than the sailors from English ships arriving in Riga. For this reason, its founders decided to promote the new sport within local sports societies.

Although the origins of football in Latvia are associated with 1907, certain activities took place even earlier: in 1906, the sports association "Kēizarmežs" hosted a sports festival that included football in its programme, and in 1905, football demonstrations were held. The history of Latvian football can be divided into three main periods: the first (1907–1940), the second, or the period of Soviet occupation (1945–1991), and the third – the period following the restoration of independence, beginning in 1992, when the national team returned to the international stage (Rubenis et al., 2000).

The national team's qualification for the 2004 European Championship finals in Portugal is considered the greatest achievement in modern Latvian football history. The success of this team, whose players had an average age of 25–27 (Girvičs, 2020), was driven by the high competitiveness of its players. Of the 23 players selected for the final tournament, 12 represented strong foreign clubs in leagues such as the English Premier League, the Russian and Ukrainian Premier Leagues, as well as the Austrian, Danish, and Israeli leagues.

For comparison, in October 2022, only eight national team candidates played for foreign clubs, and in relatively weaker leagues at that. This decline in player skill is also reflected in the results: unfortunately, the Latvian national team is currently ranked only 129th in the FIFA rankings, indicating a low level of individual proficiency in the present squad.

One of the most significant reasons for the prolonged series of failures of the Latvian national football team since 2004 is the collapse of the youth training system following the restoration of independence. This situation was aptly described by Ilmārs Krastiņš, the former director of the Riga Football School: "In the past, hundreds of willing players applied, now – a few dozen. In the past, selection tests were necessary. Now we accept everyone

who wants to play. Several good coaches have left because we could not provide them with normal working conditions” (Ulmanis, 2010).

For several years now, there has not been a single Latvian representative in Europe’s Top 5 football leagues, and the number of Latvian footballers playing abroad is considerably small compared to our Baltic neighbours. The relevance of preparing competitive athletes for professional football has never been in doubt (Haugaasen et al., 2014). This is evidenced by a significant number of studies dedicated to this issue (Grossmann et al., 2015; Schroepf et al., 2017; Roynesdal et al., 2018; Webb et al., 2020). It is clear that without the high-quality preparation of a new generation of players, Latvian football has no future. Although a vast amount of theoretical and experimental material on athlete development has been accumulated in sports science (Lundqvist et al., 2022), its practical application in Latvian conditions remains a challenge.

In recent years, there has been an increase in the number of publications analysing modern trends in youth football (Nikolaienko et al., 2021), emphasising the need to create effective competition and training systems (Nikolaienko et al., 2023). Consequently, the improvement of the training process and the organisation of competitions has become one of the central issues in the further development of the sport (García-Angulo et al., 2020).

Competitions are a recognised and effective means of improving athletes’ skills (Gulbin et al., 2013), but their role is especially significant in football. This is driven by two main factors: firstly, the high volume of games, which can reach 50 to 100 per season, and secondly, the high intensity, as the physical load of a match often exceeds that of a training session. Because of these factors, the impact of competitions on player development is immense (Teixeira et al., 2021).

However, it must be concluded that the current Latvian youth football competition system and its associated pedagogical approaches have a negative impact on the preparation of competitive players. Despite Latvia having a comparable level of infrastructure, coaching qualifications, and a number of clubs, we lag behind countries such as Iceland and Slovenia, and even Estonia and Andorra.

An empirical analysis of the Latvian football player training system reveals that the low operational efficiency of football clubs and Latvian Football Federation (LFF) academies is rooted in several interconnected reasons, including:

- an excessive focus by all involved parties – club management, coaches, and parents – on immediate sporting results (points earned, prize-winning places) rather than on long-term development;

- an unbalanced youth competition system, whose format and objectives are directed towards team results rather than the improvement of individual players' skills;
- insufficient volume and intensity of the training process, which is further negatively affected by the excessive competition load on players, thereby hindering targeted skill development.

According to the fundamental principles of long-term athlete development outlined in foundational studies (Bloom, 1985; Balyi, 2001; Norris et al., 2010), a talented athlete requires eight to twelve years of purposeful training to reach the elite level. However, in Latvian football, many coaches focus primarily on short-term results, employing methods aimed solely at preparing for the upcoming games – an approach known as “peaking by Friday” (Balyi et al., 1999). This approach ignores the fact that sustainable success is based on a purposeful training process and consistent long-term performance, rather than on isolated short-term victories.

The competition calendar is a determining factor that influences the planning of training loads throughout the annual cycle (Coutinho et al., 2015). The quality of a purposeful training process decreases significantly if young footballers are overloaded with regular competitions from an early age (Torres et al., 2007). This result-oriented environment creates a situation where football club managers prioritise not creative and development-focused coaches, but rather specialists (functionaries) who can ensure a high position in the tournament standings, often sacrificing the prospects of players' individual growth.

According to the LFF Youth Club Accreditation Regulations for the period from 2022 to 2025, Level A academies in the U13 to U18 age groups are strictly required to participate in the Elite Group of the Latvian Youth Championship in at least four age groups. These regulations effectively force club management and coaches to prioritise short-term results by concentrating on a narrow circle of leading players. To achieve the set goals, these players are overloaded and play with minimal rotation, while the rest of their teammates on the bench do not receive the match practice necessary for full-fledged development. Thus, the system itself creates the preconditions for preparing uncompetitive players, as development opportunities are provided only to a small fraction of the youth academy members.

Although a considerable amount of research on this topic has been accumulated in sports science, disagreements have long persisted among researchers regarding the primary objectives of children's and youth competitions (Kochanek et al., 2019). Latvian football decision-makers, coaches, and parents need to reconsider the current approach to youth development. International experience shows that the fundamental principle of a successful development system is a game format oriented not toward results at any cost, but rather toward the gradual and comprehensive development of players.

## **Aim of the Thesis**

Development of an innovative game format for the Latvian boys' youth football championship in the U13 age group.

## **Objectives of the Thesis**

To achieve the aim of the Doctoral Thesis, the following tasks were set:

- 1 To theoretically explore football game formats in boys' competitive activities.
- 2 To investigate the regulatory framework in Latvia and other countries regarding football game formats for boys in the U13 age group.
- 3 To study the learning needs of U13 football players and the achievement of long-term goals in 9v9 and 11v11 football game formats.
- 4 To investigate coaches' opinions on the suitability of introducing the 9v9 football game format for the U13 age group.
- 5 To develop an innovative Latvian youth championship game format for boys' football in the U13 age group, based on the results obtained in the research.

## **Research Methods**

- 1 Study of scientific literature and sources.
- 2 Document content analysis.
- 3 Video observation.
- 4 Instrumental data recording.
- 5 Interviews.
- 6 Open and axial coding.
- 7 Mathematical data processing methods.

## **Hypothesis of the Thesis**

If the format of football games for boys in the U13 age group were changed from 11 vs 11, with pitch dimensions of  $106 \times 68$  m, to 9 vs 9, with pitch dimensions of  $74 \times 52$  m, the variability and number of players' technical and tactical actions would increase, as would the number of team attacks on the opponent's goal.

## **Novelty of the Thesis**

The objective of this study is to develop an innovative and scientifically grounded game format for the Latvian youth boys' championship in the U13 age group. The development of this game format will take into consideration both the best practices from other countries and the specific characteristics of Latvian youth football. The resulting format will serve as a foundation for the Latvian Football Federation (LFF) to implement an evidence-based reorganisation of the youth competition system. Furthermore, the research methodology can be applied to analyse other game formats and evaluate their alignment with players' developmental needs.

The practical significance of this research lies in sharing its findings and the newly developed, innovative game format with the Latvian football community. In the long term, the study's results aim to foster a paradigm shift in the mindset of stakeholders – club managers, coaches, and parents – by reducing the excessive focus on short-term outcomes. Consequently, this will create a more favourable environment for discovering young football talents and fully developing their potential.

## **The influence of game formats on the development of footballers**

The research team of Lapresa, Arana, and Navajas can be justly considered pioneers in comparative studies of youth football game formats. In 2001, utilising the observational methodology of Anguera (1988), they conducted the first study within the football-specific scientific literature comparing the 9 vs 9 and 11 vs 11 formats for boys, aiming to address the following questions:

- which of the game formats, 9 vs 9 or 11 vs 11, provides children with the greatest enjoyment;
- which of the game formats, 9 vs 9 or 11 vs 11, best corresponds to the physiological needs of 12–13-year-old children;
- which of the game formats, 9 vs 9 or 11 vs 11, most effectively promotes the development of technical and tactical skills.

Following the scientific trends of the early 2000s, a research group (Arana, Lapresa, Garzo, & León, 2002) conducted a comparative study of the 7 vs 7, 9 vs 9, and 11 vs 11 youth football game formats, also employing Anguera's (1988) observational methodology. This study addressed the consensus among local youth coaches regarding the fundamental challenges players face at 12–13 years of age during their initial year of transitioning to the 11 vs 11 format, namely:

- the advantage of biological maturity over technical skill in terms of game development and the final outcome;
- players with delayed somatic development experience significant adaptation difficulties and are frequently excluded from active play because they are outcompeted by physically stronger, early-maturing peers who dominate due to physical attributes rather than technical proficiency;
- the execution quality of a player's technical skills is maintained only in match phases that do not require long passes or long-range shots;
- during corner kicks, players cannot deliver the ball into the penalty area, reaching at most the near post;
- shifts in the direction of the attack occur extremely rarely;
- the zone where offensive actions originate typically coincides with the zone where they terminate;
- infrequent shots on goal are taken from outside the penalty area;
- when clearing the ball away from the goal, it is typically kicked out by the strongest defender rather than the goalkeeper;

- the natural annual increase in a child's anthropometric parameters is asymmetrical and lags significantly behind the abrupt expansion of sports infrastructure standards (i. e., football goal dimensions).

Another scientific study dedicated to game formats (Lapresa, Arana, Carazón, Egüén, & Amatria), employing the same methodology, was conducted in 2010. In this study, utilising descriptive statistics as a general foundation and identifying temporal patterns through specific examples, the researchers compared the technical and tactical development of children in the under-8 age group across two game formats: 3 vs 3 and 5 vs 5.

In 2013, a research group consisting of Arana, Lapresa, Anguera, and Garzón conducted a study in the U11 – U12 age category comparing the 7 vs 7, 9 vs 9, and 11 vs 11 game formats, utilising an observational methodology (Bakeman et al., 1987) combined with the detection of regular structures (T-patterns) to identify which game format is better suited to player capabilities at this age.

The next significant work within the scientific community regarding youth game formats is a study by a research group (Lapresa et al., 2015), which analysed the differences between the 7 vs 7 and 8 vs 8 game formats in the U12 category for boys, relying more heavily on the utilisation of playing space during the match and formulating research hypotheses based on the correlation between offensive initiation zones and their successful completion zones.

The next step in continuing this line of research was a study by a research group (Amtria et al., 2016) in the U10 age category comparing the 7 vs 7 and 8 vs 8 boys' game formats, in which the scientists introduced a new concept – using multiple logistic regression models to predict offensive success based on the game format and the pitch zone where the play was initiated, as well as developing two simple logistic regression models to evaluate how the game format influenced the acquisition of technical and tactical skills. Success was operationally defined as a shot on the opponent's goal.

Additionally, a study was conducted in 2016 (Lapresa, Arana, Anguera, Perez-Castellanos, & Amatria) in which simple and multiple logistic regression were applied within an observational experiment to determine which game format – 3 vs 3 or 5 vs 5 – is more appropriate for the child age group from 6 to 8 years. To analyse the utilisation of the pitch (play depth), a multiple logistic regression model was applied, and, based on three simple logistic regression models, it was determined which of these game formats was more likely to improve the effectiveness of technical and tactical indicators.

Employing a more advanced observational methodology (Anguera & Hernández Mendo, 2015), a comparative study was conducted in 2017 (Jimenez, Dios, Garcia, M. Garcia, & Bosque) between two game formats – 7 vs 7 and 8 vs 8. By recording and coding data using

the computer software Lince 1.2.1 (Gabin et al., 2012), a statistical analysis was performed to determine which game format best corresponds to the needs of U8 age group players, as well as their tactical and physical capabilities.

To evaluate the impact of game formats in the U12 age category, a research group (García-Angulo, Palao, Giménez-Egido, J. García-Angulo, & Ortega-Toro, 2020) conducted a quasi-experiment involving modifications to the number of players, goal dimensions, and pitch size. By manipulating the rules and altering the match format from 5 vs 5 to 8 vs 8, the researchers analysed the impact of increasing the player density on the pitch and its subsequent influence on the technical and tactical actions of the footballers.

Another category of research is not directly concerned with comparing which game format is more appropriate for a specific age, but rather focuses on the structural properties of game formats. Examples include studies identifying match interaction patterns in football using the SOF-CODER coding system (Anguera et al., 2006); research into competition engineering as a structural approach to modifying the competitive environment in youth sports to ensure a more favourable competitive experience (Burton et al., 2011); the influence of player level and age category on positional and tactical behaviour in 7 vs 7 and 8 vs 8 formats (Serra-Olivares et al., 2019); and the impact of competitive rule modifications on collective efficacy and self-efficacy in youth football within the U12 age group across 5 vs 5 and 8 vs 8 game formats (García-Angulo et al., 2020).

Synthesising the scientific literature on boys' game formats, it can be concluded that the majority of studies utilized the scientific observational method described by Anguera (1988), which subsequently underwent further refinements and adjustments. The data obtained during these experiments were coded and subjected to statistical analysis. More recent studies have introduced logistic regression models that evaluate the probability of achieving success during offensive phases (defined as entering the opponent's penalty area or executing a shot on goal) depending on the specific zone of the pitch where the attack was initiated.

In youth football, it is essential that the training and competitive processes are structured around the principle of player readiness. Player readiness can be defined as the capacity to successfully execute tasks assigned as part of a planned long-term development program. For young footballers, demands regarding training and competition must be escalated progressively. This can entail transitioning to a higher level of performance or following a pathway toward a lower level of participation in youth football. There is no utility in presenting athletes with objectives if they lack the capacity to comprehend or fulfill them (Reilly et al., 2004).

The transition to the adult 11 vs 11 game format represents one of the most significant challenges in the long-term athletic preparation process. Numerous authors conclude that the 11 vs 11 format, even on a pitch with minimized dimensions, is excessively large for players in the U13 age category (Lapresa et al., 2001; Lapresa et al., 2006; Small, 2006; Nikolaenko et al., 2021). During matches, players spend a substantial amount of time without the ball, experiencing limited opportunities for interaction, and possess highly restricted options for executing complex technical-tactical actions, such as long or diagonal passes. This significantly curtails the opportunity for individual technical skill refinement (Gréhaigne & Godbout, 1995).

Indirect evidence of players' unreadiness for the 11 vs 11 format in the U13 age group can be found in the study by Bleidelis and Luika (2024) on the effectiveness of pass utilisation in the U13 and U14 age categories among boys' teams in the Latvian Championship. Their findings reveal potential risks associated with a premature transition to the 11 vs 11 format. The authors advocate for a more gradual progression from the 8v8 format to the 11 vs 11 format, suggesting this transition should optimally occur in the U14 age group.

Scientific research commencing in the early 2000s (Lapresa, Arana, et al.) consistently demonstrates that a premature transition to the full-sided format (11 vs 11) at 12–13 years of age negatively impacts the technical-tactical and psychological development of young footballers. Utilising observational methodology and logistic regression models, researchers have identified that an excessively large pitch and player density prevent children from functionally exploiting the playing space, render the game dependent on physical maturity rather than technical skill, and restrict ball possession time. Consequently, contemporary football science is dominated by the consensus that the player “readiness principle” must be strictly observed, encouraging a progressive scaling up of game formats and pitch dimensions (e.g., from 8 vs 8 to 9 vs 9) aligned with the physiological and cognitive capacities of the specific childhood developmental stage.

While sports competition is an integral component of youth football development, the game format must correspond to the biological and cognitive readiness of children. Scientific studies and Long-Term Athlete Development (LTAD) models demonstrate that a premature transition to the adult game format (11 vs 11) in the cohort under 13 years of age negatively affects the acquisition of technical and tactical skills, prevents the functional utilisation of playing space, and may contribute to player overload, burnout, and dropout from the sport. Instead, contemporary football pedagogy prioritizes small-sided game formats (such as 7 vs 7, 8 vs 8, and 9 vs 9), which ensure more frequent ball contacts for players and provide an optimal environment for development and decision-making.

An analysis of the practices adopted by leading European football nations (England, Germany, Italy, and Sweden) reveals a deliberate approach toward utilising the 9v9 format in the U13 age group, featuring adapted pitch and goal dimensions alongside innovative match time structures (such as dividing matches into three periods). This framework focuses primarily on individual player growth and the enjoyment of the game, substantially de-emphasising the competitive outcome. In contrast, the Latvian youth football system within the U13 age category continues to be dominated by the 11 vs 11 format (with the exception of the “Leather Ball” championship). Recent statistics indicate that this rapid and inappropriate transition to the adult 11 vs 11 format results in a significant attrition rate of both teams and players when transitioning to the U14 age category.

The novelty and practical significance of this work are further demonstrated by the dissemination of the research findings and the newly developed game format to the Latvian football community. In the long-term perspective, these results aim to facilitate a substantial paradigm shift in the mindset of all stakeholders – club executives, coaches, and parents – thereby encouraging a reduction in the excessive focus on short-term competitive outcomes. Consequently, this study contributes to establishing a more supportive environment for the comprehensive development of young footballers’ potential.

## Conclusions

Having explored the essence of boys' youth football game formats, the appropriateness of coaches' perspectives on implementing the 9 vs 9 game format in the Latvian Youth Championship U13 age group, and its connection to players' learning needs and the achievement of long-term goals, it is concluded:

- 1 Sports competitions are a fundamental and integral part of the long-term development process of young football players, as they provide the necessary emotional and physical stimulus, serve as an objective measure of skill, and offer indispensable playing experience. However, for competitions to fully promote rather than hinder player growth, their rules and game format (number of players, goal and pitch size) must be precisely adapted to the children's biological and cognitive readiness, avoiding a premature transition to adult football standards.
- 2 The LFF Player Development Program (2018) stipulates that, starting with the U13 age group, teams must play in an 11 vs 11 game format (except for the "Leather Ball" championship). For this age group, games are played on a pitch measuring 90 to 120 m in length and 45 to 90 m in width. Standard goals (2.44 × 7.32 m) and a size 4 ball are used. This game format has been utilised in the Latvian youth championships for over 25 years. According to a 2023 UEFA study that analysed data from 41 European football associations, there is no single, uniform game format applied to the U13 age group. The two most common formats are 9 vs 9 (used by 44 % of countries) and 11 vs 11 (used by 41 % of countries). Considerably less often, in 15 % of cases, an 8 vs 8 or another format is used. This diversity of formats indicates that each country's federation selects the model most suitable for itself, guided by national criteria and development strategies. The nearly equal popularity of the 9 vs 9 and 11 vs 11 game formats suggests that both are considered legitimate and effective for player development at this age stage.
- 3 The results of our study convincingly demonstrate that the 9 vs 9 game format is optimal – it much more successfully meets the developmental needs of players in the Latvian U13 age group and aligns with long-term preparation goals compared to the 11 vs 11 game format. The transition to the 11 vs 11 game format in the U13 age group is premature. It forces 12–13-year-old football players to adapt to the physical and tactically restrictive demands of adult football, sacrificing what is most important – the development of individual technique, game understanding, and creativity. The 9 vs 9 game format creates an optimal learning environment that is

intensive, dynamic, technically and tactically rich, and best aligns with the long-term development goals of players in this age group.

- 4 Among the respondents, there is dominant support for introducing the 9 vs 9 game format for the U13 age group, as the majority consider it the most suitable, while a significant portion explicitly states that the current 11 vs 11 game format is not appropriate for this age. The primary advantages are tied to player development: the format provides more frequent contact with the ball, which is critical for honing technical skills, promotes more intense play and collaboration in small groups, and is better suited to the physical abilities of the players, ensuring a natural transition from the U12 age group. However, the main challenges cited are practical organisational issues, such as the need to prepare additional pitches, alongside deep-rooted stereotypes within the 'football community' that 13-year-olds should already be playing 11 vs 11. The consensus among coaches and specialists is overwhelmingly in favour of the 9 vs 9 format as a pedagogically sound step that prioritises the long-term technical and tactical development of players, with the main obstacles stemming not from the game itself, but from practical issues and stereotypical biases.
- 5 The innovative 9 vs 9 game format serves as a logical and well-thought-out connecting stage, ensuring a smoother and less stressful preparation of players for the 11 vs 11 football format in the U14 age group. A smaller number of players guarantees more frequent contact with the ball for each footballer, which is the foundation for technical development. At the same time, it naturally creates game situations that correspond to the physical and psychological development of this age group, promoting the acquisition of both individual and group tactical skills, and allowing coaches to gradually introduce various tactical schemes. The higher intensity of this game format, with a greater number of accelerations and decelerations, purposefully develops physical qualities such as speed and agility. Furthermore, the game structure, which consists of three 25-minute thirds with mandatory playing time for all participants in the first two periods, effectively guarantees match practice for every player, while unlimited substitutions and breaks provide coaches with the necessary tactical flexibility and opportunities for communication.

As a result of the study, the proposed hypothesis was partially confirmed, demonstrating the differentiated impact that the transition from the 11 vs 11 game format to the 9 vs 9 game format has on game parameters. The transition to a reduced pitch size, while keeping the rules

unchanged, did not show a statistically significant increase in the overall volume of technical and tactical actions. In contrast, qualitative changes were observed in specific game elements. An increased average number of ball touches per unit of time was recorded, along with a higher frequency and variability of attacking actions near the opponent's goal. This manifested as multiple entries into the vicinity of the opponent's goal and the generation of more diverse episodes in the finishing phase of the attack. It can be concluded that the primary benefit of the 9 vs 9 game format is not a general quantitative increase in game actions, but rather a qualitative transformation of the game content, which purposefully stimulates players' individual involvement and enhances the efficiency and creativity of attacking actions.

## **Proposals**

- 1 LFF, in collaboration with the LFF Development and Youth Committees: amend the youth championship regulations to mandate the 9 vs 9 match format for the U13 age group nationwide. This step is essential to prioritize long-term player development, shifting the focus away from premature adaptation to the physical demands of adult football toward the enhancement of technical skills, game intelligence, and creativity. Transitioning to this match format will establish an optimal pedagogical environment tailored to the physical and psychological characteristics of players at this developmental stage, ultimately fostering more highly skilled players for the future (see the study's empirical data regarding the intensity of technical and tactical actions and player involvement in match episodes, as well as the discussion section on pages 128–134, which validates the benefits of the 9 vs 9 format and the resulting increase in goal-scoring opportunities).
- 2 The LFF and youth football clubs: implement into competitive practice the innovative match format outlined in the study, which entails structuring the match into three 25-minute periods. Codify within regulatory frameworks a mandatory playing time requirement for all players registered on the match roster during the first two periods, thereby effectively guaranteeing competitive match play for every player regardless of their proficiency level. Permit rolling substitutions exclusively during the third period, ensuring coaches retain tactical flexibility and opportunities for communication during intervals (predicated on an analysis of the protocols of the Swedish (SvFF) and Italian (FIGC) football federations and the organisation of the innovative match format, see Tables 1.10 and 1.11 on pages 51–54).
- 3 The LFF, in collaboration with regional centres: develop comprehensive guidelines and practical recommendations for adapting club infrastructure (pitch marking and the utilisation of portable goals). Ensure the integration of a dedicated training module into existing UEFA C and UEFA B coaching license curricula, focusing on the methodological and physiological rationale behind match format transitions, while applying the necessary pedagogical principles and approaches of gradualism and constructivism. Organize regular educational seminars for coaches, club executives, and parents to elucidate the advantages of the new format, thereby mitigating entrenched stereotypes regarding the transition to the 11 vs 11 format (this is derived from the coach interviews and qualitative data analysis conducted in phase 3.2 of the study, wherein pitch preparation and coaches' ambitions to compete in the 11 vs 11 format were identified as primary barriers; see p. 122).
- 4 The LFF: officially integrate the 9 vs 9 match format for the U13 age group into the LFF-approved Player Development Program, formalising this transition as a strategic

and deliberate decision. Establish a unified and coherent player development pathway that features a progressive transition from the 7 vs 7 match format at the U10–U11 age levels to the 9 vs 9 match format at the U12 and U13 levels, and only subsequently to the 11 vs 11 match format in the U14 age group, thereby mitigating adaptation stress and injury risks (substantiated by statistical data from the Latvian Youth Championship regarding high team attrition rates during the transition from U13 to U14, see Table 1.6 on page 46, as well as insights from the discussion section concerning the principle of player readiness and the Long-Term Athlete Development (LTAD) model on page 134).

- 5 The LFF Education Department: establish a systematic monitoring and data collection framework to ensure the sustainability of the new match format. Regularly aggregate quantitative and qualitative data regarding match parameters and conduct coach and player surveys to gather feedback. Coordinate further studies to analyse the efficacy of the transition from the 9 vs 9 match format (U13) to the 11 vs 11 match format (U14), thereby providing a scientific rationale for the long-term development strategy (this is derived from the core essence of the study's methodology and the conclusion of the discussion section on pages 134–135 regarding the necessity to systematically monitor and validate the long-term impact of match formats on player development).

## **List of publications, reports and patents on the topic of the Thesis**

### **Publications:**

1. Bleidelis, I., Luika, S. 2024. Comparison of the Effectiveness of Passing Performance in Football Matches for U-13 and U-14 Elite League Players of Latvian Academy of Sport Education. *LASE Journal of Sport Science*, 1–2, 49–58. doi: 10.25143/lase\_joss.v15i1-2.05
2. Bleidelis, I., Luika, S., Kolesovs, A., Boobani, B. 2025. A Comparison of Box-to-Box and Positional Possession Styles: Selecting an Appropriate Game Format for U13 Footballers (A Pilot Study). *Frontiers in Sports and Active Living*, 7. 10.3389/fspor.2025.1634446

### **Reports and theses at international congresses and conferences:**

1. Bleidelis, I., Luika, S., 2023. The evolution of football game rules. Reasons and Consequence. Akademia Wychowania Fizycznego Józefa Piłsudskiego w Białej Podlaskiej, Poland. The 16<sup>th</sup> Conference of Baltic Society of Sport Sciences: “Current trends in sports sciences and physical education”.
2. Bleidelis, I., Luika, S., 2024. Comparison of variability of passes, their effectiveness, and their usage in football matches of the Latvian youth championship for age groups U13 and U14. The Institute of Sport Sciences and Physiotherapy, Tartu, Estonia, 17th Conference of Baltic Society of Sport Sciences: “From Recreational Fitness to Performance”.
3. Bleidelis, I., Luika, S., Kolesovs, A. 2025. Tendencies in the Use of Game Zones and the Effectiveness of Players’ Actions in Different Game Formats in the U13 Age Group. Vytautas Magnus University, Kaunas, Lithuania, The 18th Conference of Baltic Society of Sport Science: “Expanding Horizons in Sport Science and Innovations”: Abstract book, 19, 113.

## References

1. Anguera, I. 1988. Medicina psicosomatica. Barcelona, Doyma. Available from: [https://www.abebooks.com/MEDICINA-PSICOSOM %C3 %81TICA-Anguera-Sojo-Peyra-L/18412425100/bd](https://www.abebooks.com/MEDICINA-PSICOSOM%C3%81TICA-Anguera-Sojo-Peyra-L/18412425100/bd)
2. Anguera, M. T., Blanco, A., Losada, J. L., & Hernández, A. 2000. La metodología observacional en el deporte: conceptos básicos. *Lecturas: Educación Física y Deportes*, 5(24). Available from <https://typeset.io/pdf/la-metodologia-observacional-en-el-deporte-conceptos-basicos-4y3zzx2juu.pdf>
3. Arana, J., Lapresa, D., Anguera, M. T., & Garzón, B. 2013. Adapting football to the child: an application of the logistic regression model in observational methodology. *Quality & Quantity*, 47, 3473–3480. Available from DOI:10.1007/s11135-012-9734-z
4. Bakeman, R., & Gottman, J. M. 1987. Applying observational methods: A systematic view. In J. D. Osofsky (Ed.), *Handbook of infant development*, 2, 818–854. Available from: <https://psycnet.apa.org/record/1987-97963-016>
5. Balyi, I. 2001. Sport system building and long-term athlete development in British Columbia. *Coaches report*, 8(1), 22-28. Available from: <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=f08aabdf147e1a5c0e46192532cda62f095cd4e0>
6. Balyi, I., & Hamilton, A. 1999. Long-term planning of athlete development, the training to win phase. *FHS: The UK's Quarterly Coaching Magazine*, 3, 7–9. Available from: <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=f08aabdf147e1a5c0e46192532cda62f095cd4e0>
7. Bloom, B. 1985. *Developing talent in young people*. New York, Ballantine books, 19–24.
8. Coutinho, D., Gonçalves, B., Figueira, B., Abade, E., Marcelino, R., & Sampaio, J. 2015. Typical weekly workload of under 15, under 17, and under 19 elite Portuguese football players. *Journal of sports sciences*, 33(12), 1229–1237. Available from DOI: 10.1080/02640414.2015.1022575
9. Gabin, B., Camerino, O., Anguera, M. T., & Castañer, M. (2012). Lince: multiplatform sport analysis software. *Procedia-Social and Behavioral Sciences*, 46, 4692–4694. Available from DOI:10.1016/j.sbspro.2012.06.320
10. García-Angulo, A., García-Angulo, F. J., Torres-Luque, G., & Ortega-Toro, E. (2019). Applying the new teaching methodologies in youth football players: toward a healthier sport. *Frontiers in physiology*, 10, 121. Available from DOI: 10.3389/fphys.2019.00121
11. García-Angulo, A., Palao, J. M., Giménez-Egido, J. M., García-Angulo, F. J., & Ortega-Toro, E. 2020. Effect of the modification of the number of players, the size of the goal, and the size of the field in competition on the play actions in U-12 male football. *International journal of environmental research and public health*, 17(2), 518. Available from DOI:10.1016/j.psychsport.2020.101688
12. Girvičs, K. 2020. *Mūsu lielās spēles*. Rīga, Latvijas Futbola federācija, 11.–22.
13. Grossmann, B., & Lames, M. 2015. From talent to professional football–youthism in German football. *International Journal of Sports Science & Coaching*, 10(6), 1103–1113. Available from DOI:10.1177/17479541177464
14. Gulbin, J., Weissensteiner, J., Oldenziel, K., & Gagné, F. 2013. Patterns of performance development in elite athletes. *European journal of sport science*, 13(6), 605–614. Available from DOI: 10.1080/17461391.2012.756542
15. Haugaasen, M., & Jordet, G. 2012. Developing football expertise: a football-specific research review. *International review of sport and exercise psychology*, 5(2), 177–201. Available from DOI:10.1080/1750984X.2012.677951
16. Haugaasen, M., Toering, T., & Jordet, G. 2014. From childhood to senior professional football: A multi-level approach to elite youth football players' engagement in football-specific activities. *Psychology of sport and exercise*, 15(4), 336–344. Available from DOI:10.1016/j.psychsport.2014.02.00

17. Jiménez, M. A., Dios, R. M., García, S. L., García, J. E. M., & del Bosque, R. A. 2017. Verdades y mitos del fútbol 8: ¿ realmente se adapta más la competición al niño?. *Revista Internacional de Deportes Colectivos*, 31, 110–125. Available from: <https://investigacion.ubu.es/documentos/60c7ffa6c5de236d050c8930>
18. Lapresa, D., Álvarez, I., Anguera, M., Arana, J., & Garzón, B. 2015. Comparative analysis of the use of space in 7-a-side and 8-a-side soccer: How to determine minimum sample size in observational methodology. *Motricidade*, 11(4), 92–103. Available from DOI:10.6063/motricidade.4138
19. Lapresa, D., Arana Idiakez, J., Anguera Argilaga, M. T., Pérez Castellanos, J. I., & Amatria, M. 2016. Application of logistic regression models in observational methodology: game formats in grassroots football in initiation into football. *Anales de Psicología*, 32(1), 288–294. Available from DOI:10.6018/analesps.31.3.186951
20. Lapresa, D., Arana, J., Carazón, B., Egüén, R., Amatria, M. 2010. Adaptació de la competició en la iniciació al futbol: estudi comparatiu de les modalitats de futbol 3 i futbol 5 en categoria prebenjamí. *Educació Física i Esports*, 101(3), 43–56. Available from: <https://raco.cat/index.php/ApuntsEFE/article/view/248111>
21. Lundqvist, C., Gregson, W., Bonanno, D., Lolli, L., & Di Salvo, V. 2024. A worldwide survey of perspectives on demands, resources, and barriers influencing the youth-to-senior transition in academy football players. *International Journal of Sports Science & Coaching*, 19(1), 162–170. Available from DOI: 10.1177/174795412211356
22. Nikolaenko, V. V., & Vorobiov, M. I. 2023. Aspects of technical and tactical training of young football players. *Вид-во УДУ імені Михайла Драгоманова*, 4 (163), 12–17. Available from: <http://enpuir.npu.edu.ua/handle/123456789/40384>
23. Nikolaenko, V., & Maksymchuk, B. 2021. Cycles of training sessions and competitions of youth football players. *Revista Românească pentru Educație Multidimensională*, 13(2), 423–441. Available from: <https://reposit.uni-sport.edu.ua/xmlui/handle/78787878/4021>
24. Norris, S. R. 2010. Long-term athlete development Canada: attempting system change and multi-agency cooperation. *Current sports medicine reports*, 9(6), 379–382. Available from DOI:10.1080/17461391.2012.756542
25. Reilly, T., Richardson, D., Stratton, G., & Williams, A. M. 2004. Youth soccer: From science to performance. London, Routledge. Available from DOI: 10.4324/9780203644133
26. Roynesdal, O., Toering, T., & Gustafsson, H. (2018). Understanding players' transition from youth to senior professional football environments: *A coach perspective*. *International Journal of Sports Science & Coaching*, 13(1), 26-37. Available from DOI: 10.1177/1747954117746497
27. Rubenis, M. 2004. *Latvijas futbola ceļš uz Portugāli*. Rīga, Jumava, 7.–13.
28. Rubenis, M. 2006. *Latvijas futbolam 100*. Rīga, Latvijas Futbola federācija, 9.–10.
29. Rubenis, M., Brīvers, I., Ērmanis, A., Karpuškins, V., Beldavs, A. 2000. *Latvijas futbola vēsture*. Rīga, Apgāds Jāņa sēta, 9.–20.
30. Schroeppf, B., & Lames, M. 2018. Career patterns in German football youth national teams – a longitudinal study. *International journal of sports science & coaching*, 13(3), 405–414. Available from DOI:10.1177/1747954117729
31. Teixeira, J. E., Forte, P., Ferraz, R., Leal, M., Ribeiro, J., Silva, A. J. & Monteiro, A. M. 2021. Monitoring accumulated training and match load in football: *A systematic review*. *International Journal of Environmental Research and Public Health*, 18(8), 3906. Available from DOI:10.3390/ijerph18083906
32. Torres, C. R., & Hager, P. F. 2007. De-emphasizing competition in organized youth sport: Misdirected reforms and misled children. *Journal of the Philosophy of Sport*, 34(2), 194–210. Available from DOI:10.1080/00948705.2007.9714721
33. Torres, C. R., & López Frías, F. J. 2023. A just organized youth sport. *Journal of the Philosophy of Sport*, 50(1), 83–99. Available from DOI:10.1080/00948705.2023.2165931

34. Ulmanis, A. 2010. *Patiesībā bija tā*. Jūrmala, Lielupes izdevniecība, 6.–15.
35. Webb, T., Dicks, M., Brown, D. J., & O’Gorman, J. 2020. An exploration of young professional football players’ perceptions of the talent development process in England. *Sport management review*, 23(3), 536–547. Available from DOI:10.1016/j.smr.2019.04.007