

**NATIONAL SPORTS ACADEMY
“VASSIL LEVSKI”**

Department of Football and Tennis



ANTONIO VALERIEV VELIKOV

**MANAGEMENT MODEL
OF A FOOTBALL ACADEMY**

ABSTRACT

SOFIA, 2026

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ABSTRACT

of a dissertation thesis for the educational and scientific degree “Doctor of Philosophy”. Professional field 7.6. Sport, Doctoral program
“Theory and Methodology of Sport Science”

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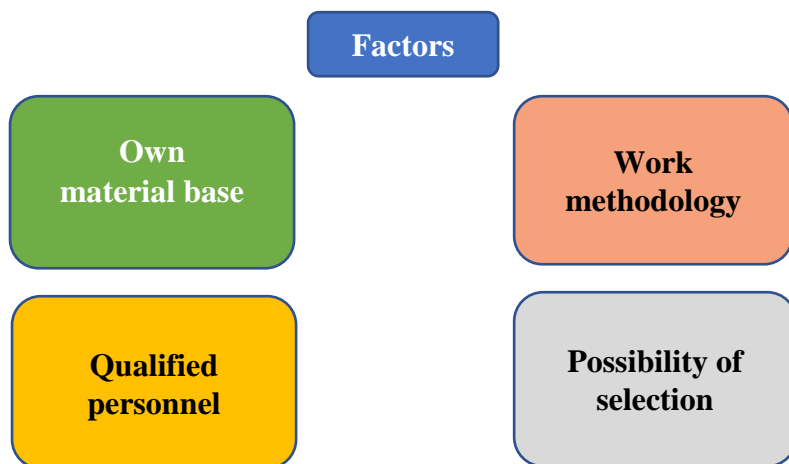
The dissertation work was discussed at an internal defense meeting and proposed for public defense by the Department of Football and Tennis of the National Sports Academy “Vassil Levski”.

The dissertation work contains 129 pages, illustrated with 21 tables and 47 figures. The bibliography includes 100 literary and documentary sources, 51 in the Cyrillic, 11 in the Latin alphabet and 38 internet sources.

The public defense of the dissertation work for the educational and scientific degree “Doctor of Philosophy” will be held on April 8, 2026 at 2:00 p.m. in Hall A3 of the National Sports Academy “Vassil Levski” (Studentski Grad, Sofia) at a meeting of a specialized scientific jury. The materials for the dissertation defense are available in the library of the National Sports Academy “Vassil Levski”.

INTRODUCTION

The football academy is a place where talents are cultivated and developed, and in which professional clubs are interested. It has been proven that players acquire not only technical skills and tactical understanding of the game at the academies, but they also develop their psychological resilience (Fenyő & Rábai, 2020). According to Argi et al. (2021), overall development through structural programs can lead to lower costs for player development. Bańbuła (2024) believes that using academy players provides better cohesion in the team, which he considers as a strategic contribution.



Determining factors for a football academy: According to a number of specialists, the system for work with adolescent football players includes the following main elements: target setting, selection of young talents, educational work, coach and training process, competitions, recovery process and complex control.

Modelling is the process of creating an efficient work mechanism. It has to be tested in specific conditions, corresponding to the conditions in a real sports environment. The results from the

experiments show how applicable and effective an activity is and how functional it will be. There are fundamental scientific achievements and principles in football, without which the game would not be what it is at present. The model allows for an already studied or a newly developed mechanism to be used, without experimenting with the players. Time and effort are saved in this way, and the risk of making mistakes in the training process is minimized. Modelling is first applied in sports practice by B. B. Костюкевич. He considers a model as an instrument for planning and management of the training process. Besides, modelling is also used in optimizing the players' preparation and so it has a special place in the training process. The main goal is that the training process is optimal and resolving the tasks set.

One of the activities is the organization of the training process, which involves the creation of "model characteristics" in the preparation of the competitive activity: technical, tactical, physical and game parameters. Another activity is related to the project-target approach, in which the construction of the training session involves using exercises containing target tasks (model training tasks). Besides, it is connected to different aspects of coaching: physical, technical and tactical, game and competitive. This activity is also related to the analysis, control and prognostics of the process.

The problems in the development of young football talents in Bulgaria have been studied by a number of authors. They analyze the problems connected with the preparation of the players and the work in the football academies. They believe that purposeful and controlled work with young players has a positive impact on their development. According to М. Бъчваров (1999), "the term physical fitness (preparation) refers to a specific state (level, stage, degree) in the development of the basic physical qualities – speed, strength, endurance". The author analyses the structure of physical fitness in football in terms of age and sex, the rules and principles of training

for physical fitness, loading, fatigue, recovery, sports traumatism, psychological preparation, principles of the game, technique, etc. and develops a classification of exercises for integral physical fitness, as well as programing and control. This leads to changes in the game dynamics. Besides, М. Бъчваров, Л. Димитров, А. Гигов (2008) have serious scientific and applied research in the area of football pressing, conditioning and game pressure.

HYPOTHESIS: The implementation of a unified model of football academy management can lead to higher efficiency of functioning and the achievement of better results.

I. Leading football academies in Europe

Of the English clubs, the most prominent in this regard is Manchester United, which developed a youth system in the 1950s. The academy is part of the Elite Player Performance Plan (EPPP). This is a project of the English Premier League which funds and certifies the academies. This organization classifies football clubs in England, and Manchester United falls in Category 1, which is the highest category. The academy receives access to the greatest funding and resources. The Training Center is called Carrington, and in recent years around 60 million pounds have been invested in its modernization.

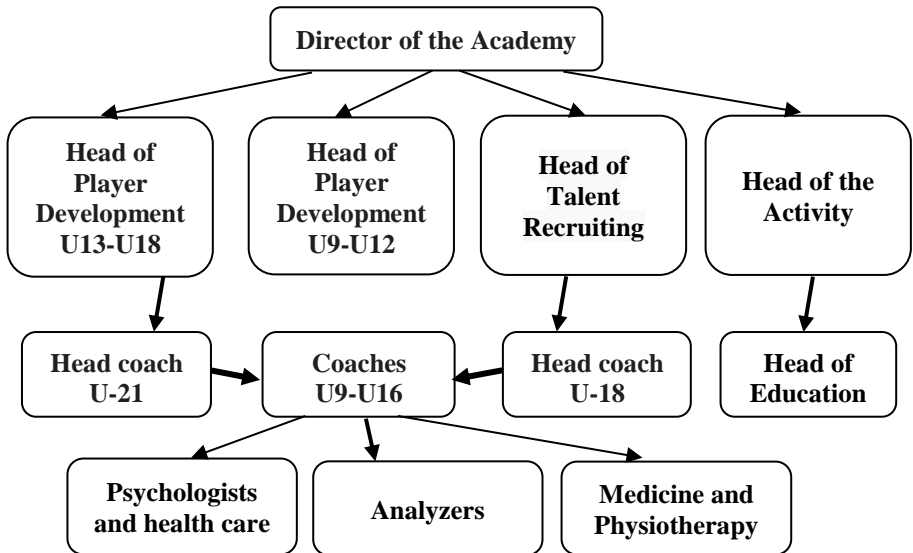


Figure 1. *Structure of the academy of Manchester United*

The academy of Barcelona, La Masia, is world-renowned for its successful work with adolescents. According to a study of the academies worldwide, Barcelona academy ranks second. Over the

past two years it has generated a revenue of 96 million euros as a result of the successful player development.

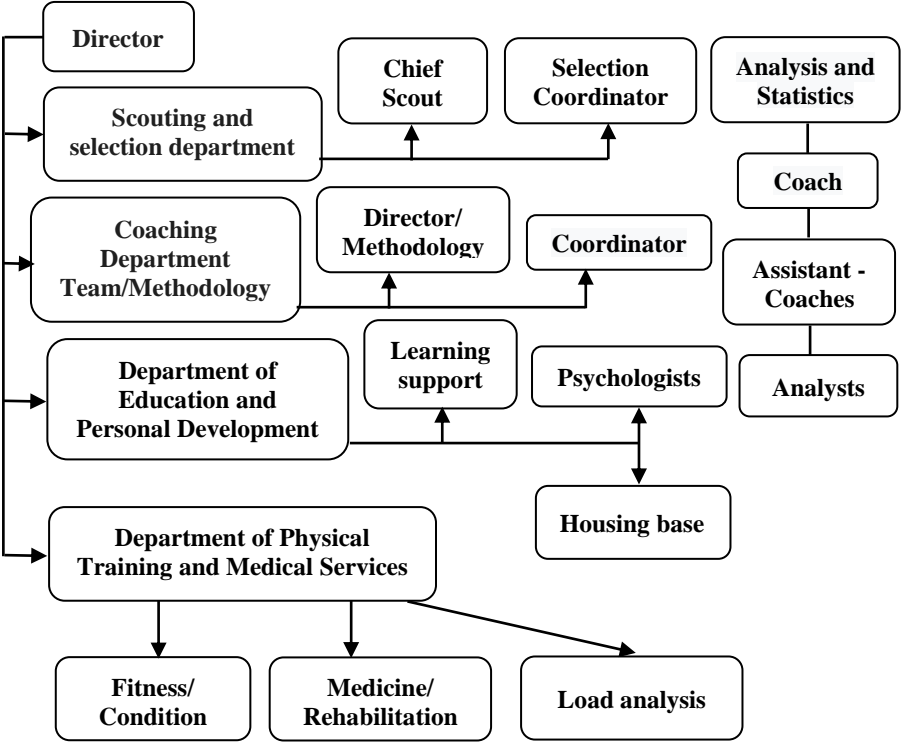


Figure 2. *Structure of the academy of Barcelona*

The academy of Bayern Munich aims to provide players for the first team. 70 million euros were invested in its construction. The sports base has 8 football pitches and a stadium for U17 and U19 with a capacity of 2500 seats. In the last 10 years, the academy has produced 35 professional footballers who have been successful. The German Football Association categorizes academies. On this basis, the academies receive stars. The maximum number of stars is three, and Bayern academy is rated with three stars.

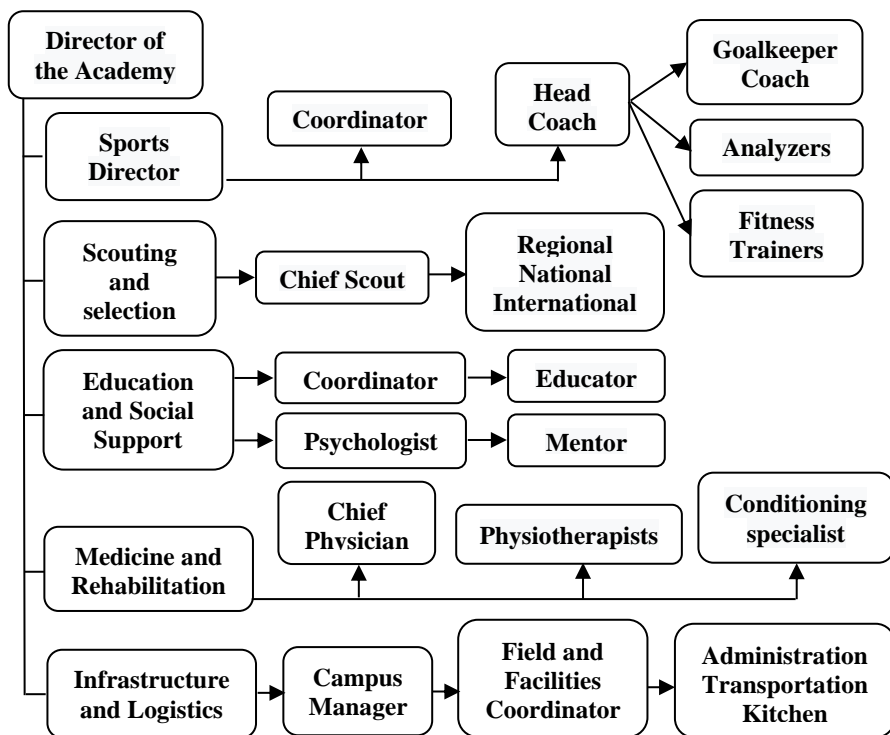


Figure 3. *Structure of the academy of Bayern Munich*

The state-run football academy of France INF Clairefontaine functions very well. The academy was established in 1988 and it has a national status. Its main objective is to develop young players between the ages of 13 and 15, ready for professional football and for the national team of France. It is entirely financed by state funds, provided by the Ministry of Sport and by regional governments, using development programs from UEFA and FIFA.

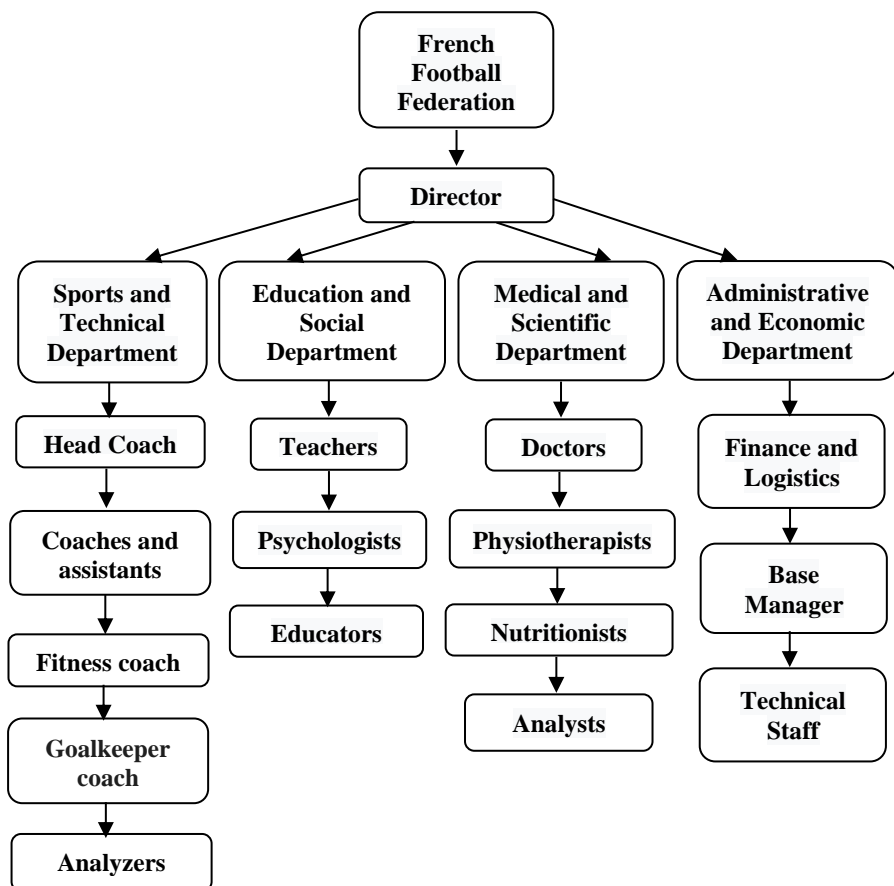


Figure 4. *Structure of the French academy Clairefontaine*

The football academies in Italy are also among the leading ones in the preparation of players. The most renowned Italian academies are those of Juventus, Milan, Inter and Fiorentina. The academy of Juventus is the most famous. Its basic aim is to prepare players for the first team, or players who have the potential to continue their professional development. The training base has 7 football pitches, a school, a dormitory, a medical and therapeutic center, as well as a center.

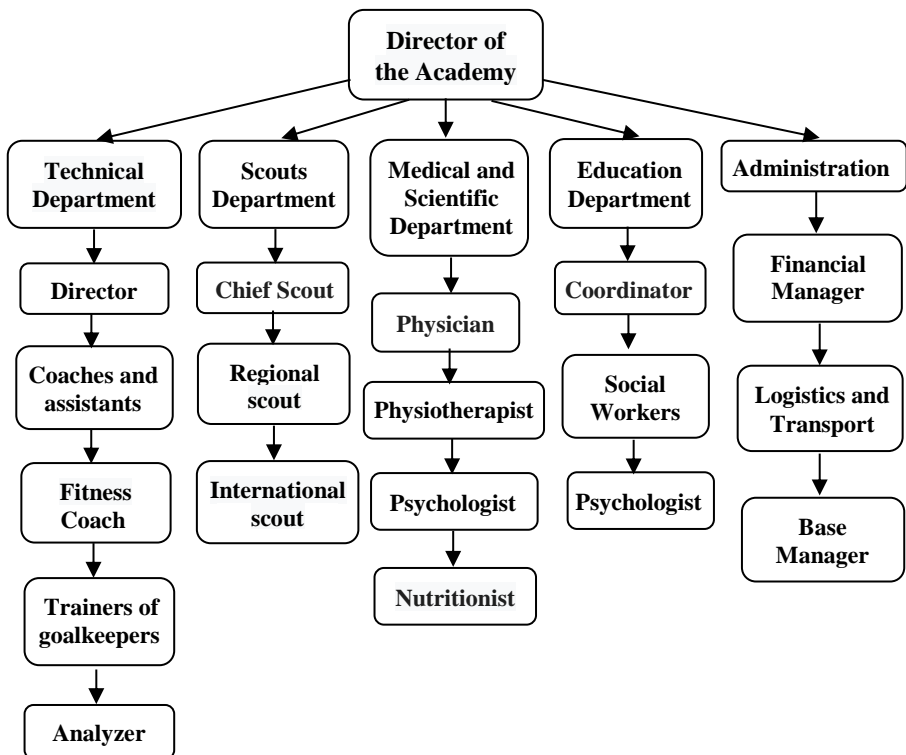


Figure 5. *Structure of the academy of Juventus*

The Dutch clubs are pioneers in working with adolescents, especially Ajax Amsterdam. The motto of its academy is “The Future”. The material base includes 12 football pitches, a dormitory and a school, a medical and scientific center, an analysis center and a stadium with a capacity of 2500 seats. Every coach at the academy holds an “A” or “PRO” license. The club philosophy is aimed at implementing the 4-3-3 formation. A unified player rating system is introduced, called TIPS (Technique, Insight, Personality, Speed). Selling or trading players is the main source of income. The general sponsors of the club are ADIDAS, ZIGGO, ABN AMRO. The Dutch Football Association supports the club by training coaches. The international activity “Ajax Camps” also supports the club financially.

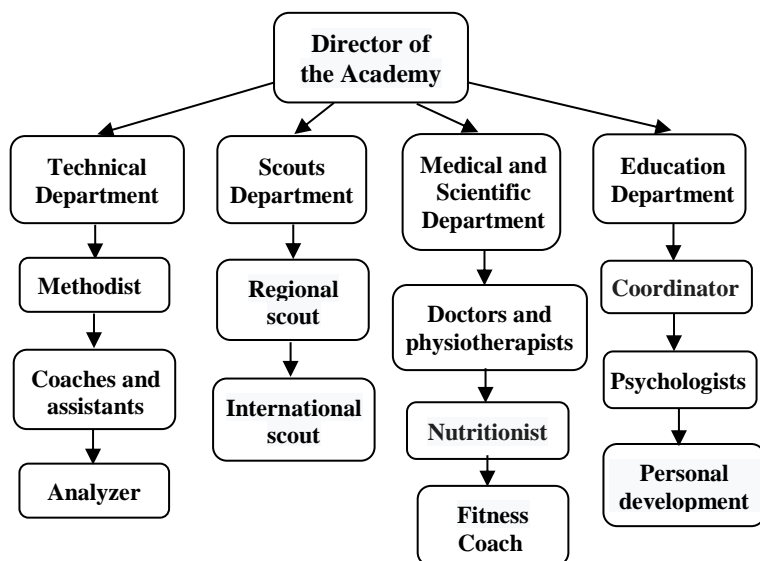


Figure 6. *Structure of the academy of Ajax*

I.2. Football academies on the Balkans

The Greek football system operates with a focus on the more traditional teams. Each administrative region has leading football clubs. The smaller teams act as “satellites” to the leading teams.

The football system of Serbia is among the most successful ones in recent years. The national team participates in the major football forums, and the players developed by the Serbian football system play in elite European teams. The Serbian football system is ranked 4-th in the world in terms of produced footballers who play abroad.

In the last few years the Croatian football system is among the most productive on the Balkans. The participation of the country’s national teams in important football forums is a proof of the successful development of young players. Also, at club level, there are footballers in some of the most renowned European teams who are products of the Croatian system. The leading teams are FC Dinamo (Zagreb) and FC Hajduk (Split).

Turkey stands out from the other Balkan countries with its multi-millions population. Over the years, their football system has created good footballers, playing in the strong European championships. Their national team often participates in continental football forums. The leading football clubs in Turkey are: Galatasaray, Fenerbahce, Besiktas, Trabzonsport. The academy of FC Galatasaray is one of the most successfully operating in the country.

The Romanian football system is far from its best years. Nevertheless, the national team of the country participated in the last European championship in 2024. At club level, the FC Steaua (Bucharest) won the ECC (European Champions Cup) in 1986. Thus FC Steaua became the first Eastern European team to win the European Champions Cup.

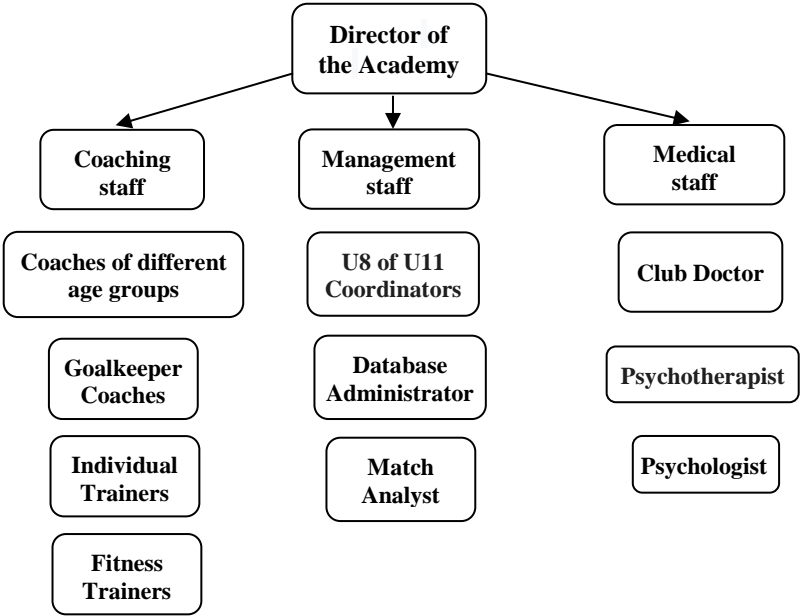


Figure 7. *Structure of the academy of FC Dinamo Zagreb*

I.3. Football academies in Bulgaria

There are not many football academies in Bulgaria. After the revival of Ludogorets FC and its entry into professional football in Bulgaria, about 15 million leva were invested in Ludogorets academy, by means of which the entire sports base was built.

The academy of FC Levski is one of the biggest in Bulgaria. Contacts were made with football schools for cooperation, through which player exchange is realized. The academy of FC Levski is funded directly by the club, relying mainly on incomes from sponsorships, tickets and transfers.

The academy of the CSKA is also one of the leading ones in the country. It trains about 250 adolescents from all age groups. The club management has established partnerships with football schools across the country, allowing them to exchange players and coaches. According to the information, the club has received funding of 13,5 million leva under the program “National Fund for Sports, Culture, Arts and Science”.

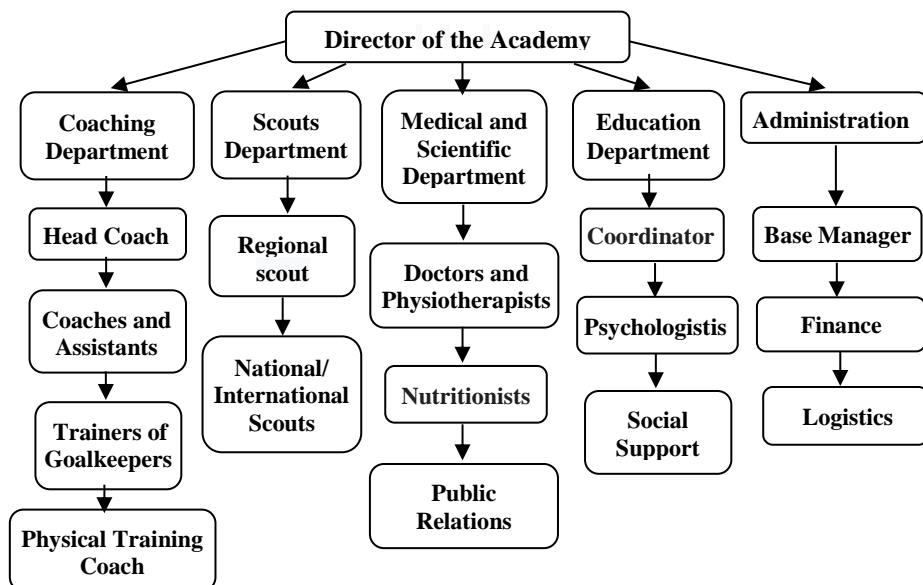


Figure 8. *Structure of the academy of Ludogorets*

II. Aim, tasks, methodology and organization of the study

The aim of the study is to increase the quality of management of the football academies by developing and implementing a unified training model, in order to make the sports preparation of the football talents more effective.

In relation to the aim of the study, we set the following **tasks**:

1. A literary study on the principles of functioning of the football academies in Europe, on the Balkans and in our country.
2. A survey of coaches' opinions about the ways of functioning and effectiveness of football academies.
3. A survey on the opinions of football experts in charge of football academies on their management.
4. Development of a unified model of management and functioning of a football academy.
5. Development of methodological guidelines for the effective application of the model for management and functioning of a football academy.

Methodology of the study. The following methods were used for the realization of the research tasks:

- Research and analysis of literary and documentary sources.
- Survey research.
- Expert interview.
- Mathematical and statistical methods.

III. Analysis of the acquired results

III.1. Analysis of the survey results.

Table 1. *Participants in the experimenta*

Participants in the interview - experts	Participants in the survey – coaches
PFC Septemvri (Sofia)	110 coaches
FC DIT (Sofia)	
PFC Slavia (Sofia)	
PFC Lokomotiv (Sofia)	
PFC Spartak (Pleven)	
PFC Etar (V.Tarnovo)	
PFC Neftohimik (Burgas)	
PFC Pirin (Blagoevgrad)	

110 licensed football coaches participated in the survey, each of whom practices the coaching profession. When preparing the questionnaire, we preserved the anonymity of the colleagues, so that they could be as objective as possible in their responses. The aim of the survey was to collect information, connected with the quality of work with adolescents and the management of football schools and academies. The coaches gave their answers while practicing their profession in the amateur and professional clubs in the country.

To analyze the results, we used data processing software IBM SPSS Statistics.

Table 2. *Variation analysis of the survey data*

Анкетно проучване								
n	X min	X max	R	X	S	V	As	Ex
110	7	26	19	14,86	4,04	16,30	0,16	-0,44

The conducted variation analysis of survey data shows that: in column **n** the coaches participating are 110, column **X_{min}** reflects the smallest number of opinions per question, column **X_{max}** shows the greatest sum of opinions per question. Column **R** (range) provides information about the difference between **X_{min}** and **X_{max}** – 19. The mean value is denoted by **X**. The standard deviation from the mean value is presented in column **S**. Column **V** gives information about the coefficient of variation. It is calculated by a mathematical formula. Accordingly, the standard deviation from the mean **S**, divided by the mean **X**, multiplied by 100. The information in the last two columns **As** (asymmetry) and **Ex** (**kurtosis**) is related to the dispersion of values before (**As** – **asymmetry**) and after (**Ex** – **kurtosis**) the mean value.

Our questionnaire contains 15 questions. To the question “Does the capacity of the material base correspond to the number of children in your club?”, the coaches’ answers are presented in Table 3.

Table 3. *Does the capacity of the material base correspond to the number of children in your club?*

	Frequency	Percentage %	Valid. %	Cumulative process
Yes	50	45,5%	45,5%	45,5%
No	60	54,5%	54,5%	100%
Total	110	100,0 %	100,0 %	

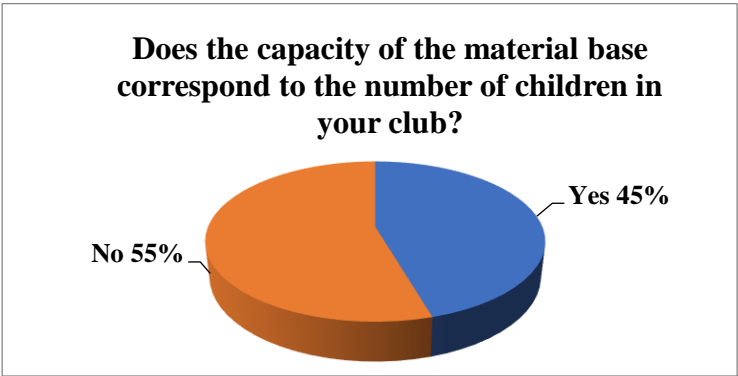


Figure 9. *Does the capacity of the material base correspond to the number of children in your club?*

Our next question to the coaches was: “*Have you ever had to share a pitch with another colleague (example: Football 7-a-side pitch)?*”

Table 4. *Have you ever had to share a pitch with another colleague?*

	Frequency	Percent %	Valid. %	Cumulative percent
Yes	89	80,9%	80,9%	80,9%
No	12	10,9%	10,9%	91,8%
Sometimes	8	8,2%	8,2%	100,0%
Total	110	100,0 %	100,0 %	



Figure 10. *Have you ever had to share a pitch with another colleague?*

In Table 5 and Figure 3 we present the answers to the question: “Does your club work according to a uniform methodology?”.

Table 5. *Does your club work according to a uniform methodology?*

	Frequency	Percent %	Valid. %	Cumulative percent
Yes	35	32%	32%	32%
NO	75	68%	68%	100,0%
Total	110	100,0 %	100,0 %	

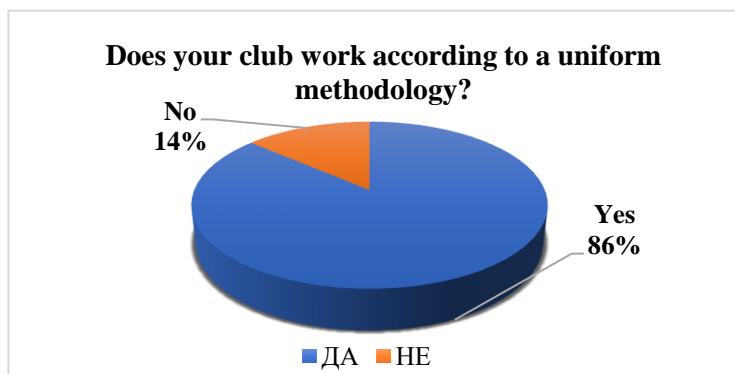


Figure11. *Does your club work according to a uniform methodology?*

The coaches' answers to the question: "Do you think we should work according to a unified methodology?" are presented in *Table 6* and *Figure 12*.

Table 6. *Do you think we should work according to a unified methodology?*

	Frequency	Percent %	Valid. %	Cumulative percent
Yes	95	86,4%	86,4%	86,4%
No	15	13,6%	13,4%	100,0%
Total	110	100,0 %	100,0 %	

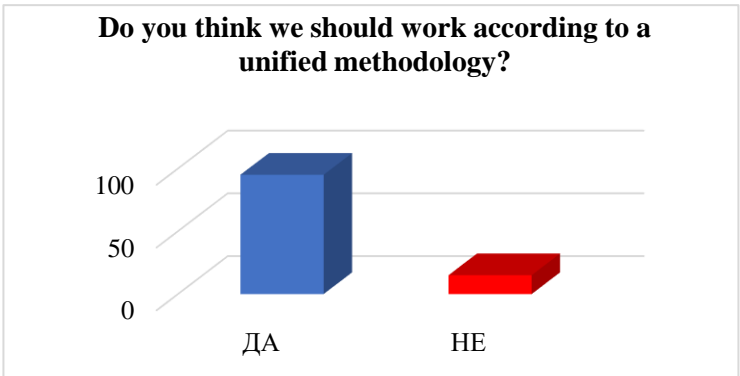


Figure 12. *Do you think we should work according to a unified methodology?*

III.2. Analysis of the results acquired from the interview with experts in football management

For the second part of the study, we prepared questions for an interview with managers. Our theoretical model of football academy management was also applied. The goal was our interlocutors to be acquainted with the prepared model, in order to compare it with the

current structure and functioning mechanism of the football academy or school where they work.

Question 1: The picture presents a model of football academy management. Examine its components and make a brief analysis of the positions within it.
Question 2: Can the model be functional in this form?
Question 3: When comparing the football academy model we propose and the model that you manage, do you find more similarities or more differences?
Question 4: What do you think should be added/ removed to make the model more functional?
Question 5: How should the financing of Youth Football be provided in the country? (Example: academies and schools with state funding, the professional club from the private sector)
Question 6: What is the difference between football schools and football academies?
Question 7: What should a football organization have when working with adolescents to prepare them for professional football?
Question 8: Can a traditional club in our country have a satellite team? (Example: In Croatia, Serbia and Greece, traditional teams have satellite teams)
Question 9: Should members of the academies/schools and professional clubs pay membership fee (monthly fee)?
Question 10: What will be the effect on work with adolescents if Youth Football is funded directly by the state?

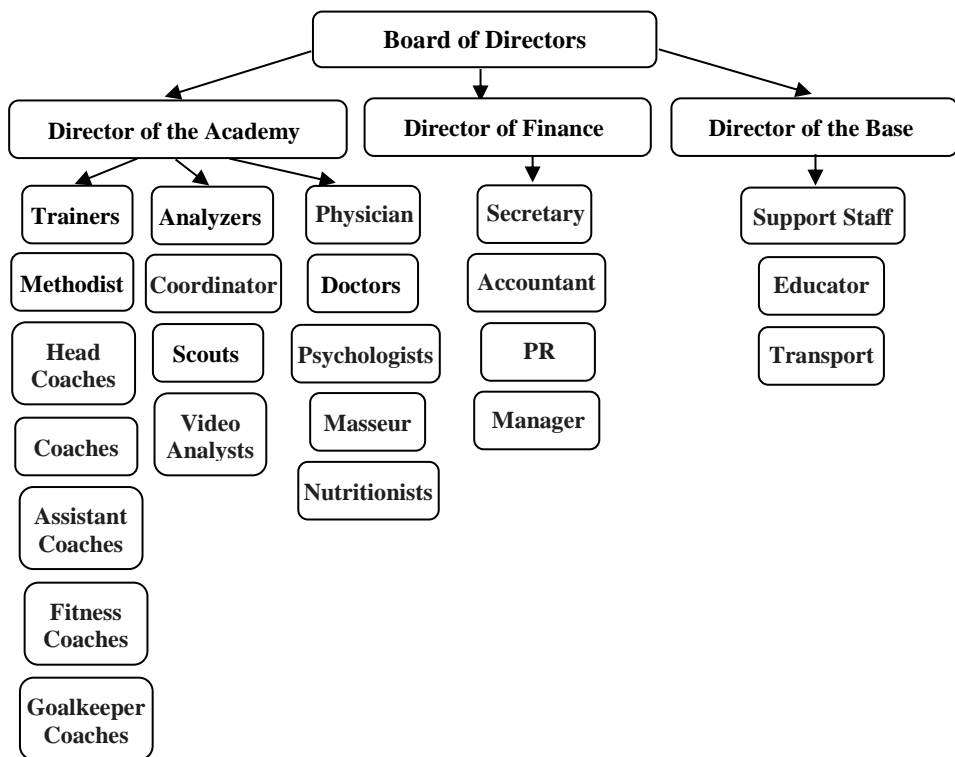


Figure 13. *Model of football academy management.*

Nº	Variable 1	Variable 2	Cramér's V	p-value
1.	1. What coaching license do you hold?	2. What coaching experience do you have?	0.392	1.22e-08
2.	3. The capacity of the material base...	4. Have you ever had to divide terrain?	0.312	0.00184
3.	6. Do you think that a unified methodology should be used?	7. Do children pay a monthly fee?	0.311	0.00186
4.	10. Day off during the week?	11. Do you perform other duties?	0.285	0.0212
5.	1. License	7. Membership fees	0.268	0.00737
6.	7. Membership fees	14. Employment	0.266	0.0156
7.	13. Who carries out the selection?	14. Employment	0.235	0.0105
8.	1. License	7. Membership fees (repeat)	0.229	0.0448
9.	2. Experience	13. Who carries out the selection?	0.217	0.0124
10.	7. Membership fees	13. Who carries out the selection?	0.214	0.0298

Table 7. *Correlation analysis of data from the interview with experts*

Date from the interview with the experts are presented in Table 7. The correlation analysis shows the relationship between the questions. The coefficient of **Cramers's V** measures how strong is the correlation between the questions. It is considered a strong correlation when the coefficient exceeds 0,4. The strongest correlation is between the first pair of questions with a value of 0,392. The weakest correlation value is 0,214. The correlation values are in the range between **low** and **moderate**.

Table 8. *Professionalization index*

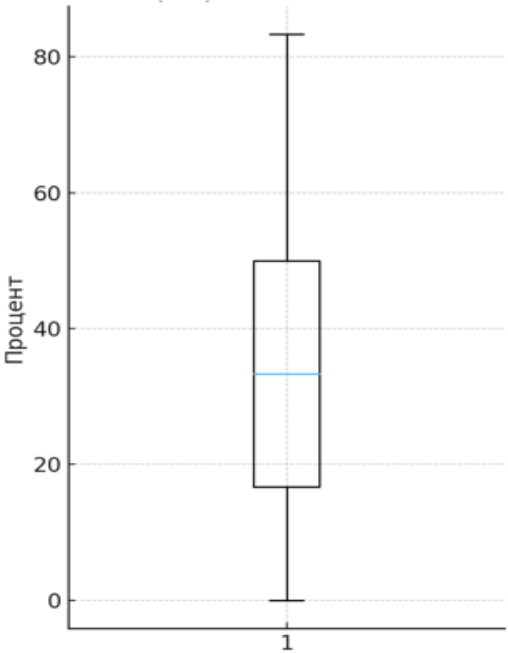


Table 8 presents data using the composite indexing method with binary transformation: an assessment of the degree of professionalization, built by binary coding of certain indicators. Each indicator takes on a value of 0 or 1 depending on the presence

or absence of the corresponding characteristic. Accordingly, for the preparation of the method, we have selected specific questions that will be indicators for evaluation: availability of unified methodology, availability of an assistant coach, material resources, player testing and selection. The results of the indexing show that the clubs of the interviewed experts receive an average value of 2,3 out of a highest possible value 5 (there are 5 known criteria). Respectively, the levels of professionalization are below average and within the range of low to average professionalization.

III.4. SWOT Analysis

The analysis contains four points of view before starting a project. Its content includes presenting: S – strengths, W – weaknesses, O – opportunities, T – threats. Three options are adopted when preparing a certain working mechanism: optimistic, realistic and pessimistic. Each of them is possible depending on the conditions, in which the organization is placed. We are aware that high-performance football is a financially dependent endeavor. Factors such as politics, economics, demographic distribution and sports infrastructure are determining for the organization.

Table 9. *SWOT Analysis*

Strengths	Weaknesses
<ul style="list-style-type: none"> • Distribution of responsibilities • Methodological consistency in the work process • Material provision • Financial provision • Staff provision 	<ul style="list-style-type: none"> • Financial difficulties and uncertainty • Lack of positive results • Difficulties in placing football players • Coaching changes • Financial instability

Opportunities	Threats
<ul style="list-style-type: none"> • Interaction with other clubs • Expanding the sale and placement of football players • Attracting adolescents • Stabilization and increase of financial revenues 	<ul style="list-style-type: none"> • Low efficiency • Unclear management decisions • Unsatisfactory/ bad results • Weaknesses in staff provision • Low or zero return on investment

III.5. Management model of a football academy

The model we have developed is presented in Figure 5. It represents a structure in which there are strictly defined positions. Each managerial position is occupied by an expert in the activity.

Academy Director - has the largest team in the structure and his/her main task is to control and regulate the actions of the academy staff.

Director of Finance – controls all financial income and expenditure of the academy.

Sports Facility Director – develops and maintains the sports facilities in the condition necessary for use.

III.6. Guidelines for applying the model

We believe that the unified football academy management model we have developed will have a positive effect on the future results of football in Bulgaria. The model could not be implemented if the following components are not available: centralized funding (state funding), peripheral funding (sponsorship), own club base, provision of technical staff and experts, methodology for training adolescents.

1. Reports: quarterly activity reports of all positions in the academy, to be reviewed and responded to at the general academy meetings.
2. Fiscal control: transparency in the financial operations of the academy: income/expenditure.
3. Qualification: periodical participation in specialized internships and programs (mostly coaching) for improving specialized qualifications.
4. Partnership: periodical meetings with specialists and staff from the clubs in direct partnership. Internship programs for coaches. Creation of new partnerships.
5. Additional rewards: encouragement for achieved results (winning an award, placing a football player).

CONCLUSIONS AND RECOMMENDATIONS

1. CONCLUSIONS

The dissertation work explores theoretical, methodological and applied problems in the creation, structure and functioning of football academies. The systematizing, processing and interpreting of the experimental material allows us to reveal a number of cause-and-effect relationships with an important methodological and practical application in the management and organization of the educational and training process for adolescent football players.

On this basis, the following more significant conclusions can be drawn:

1. It has been established that the most popular licenses in Bulgaria are UEFA B and UEFA C, based on a survey of football coaches. In terms of football practice, this means that there is a predominance of football specialists, who work mainly with game formats such as F5, F7 and F9.
2. The majority of the coaches believe that the capacity of the sports facilities does not match the number of children at the

academy. The material base of the academies in other Balkan countries is more developed compared to that in our country. According to 63,7% of the surveyed coaches, their clubs' facilities have all the fields for the different game formats. In other cases, there is a lack of terrains for some of the youth game formats. The lack of fields for the different game formats for adolescents, forces 80% of the surveyed coaches to share a field to conduct the training process (Example: football 7).

3. The greater number of coaches do not use a unified methodology in their clubs. Those who believe that it is necessary to use a unified methodology are 86,4%. The development of such a methodology must be consistent with the conditions in which it is applied.
4. There is a widespread practice of paying monthly fees to the clubs. This practice should be stopped, and initial selection of future football players should be a priority.
5. It has been clarified that testing players, which is done by the majority of coaches, is an important part of the training process
6. The executives of the clubs in our country should provide qualified staff members to perform specific functions in the clubs.
7. According to experts, the created model is applicable and realistic and the positions in it are justified by precise and clear functions. Still, they believe that only a few clubs in the country can afford to support a structure with so many positions. In common practice one person is responsible for several functions in the structure.
8. It is proposed that the Bulgarian football system should have a categorization of children's and youth football. According to such a categorization, state funds will only be received by clubs that have met certain criteria.

2. Recommendations for sports pedagogical and management practice.

1. We propose that each expert in the management of a football academy be responsible for those functions that the position requires, in order to increase the quality of the decisions made.
2. We propose that the staff (coaches in the academy) manage the training process only for a certain number of players. When the number of players increases, the introduction of an assistant coach is required.
3. Every football academy must have a concept for the development of young players. In case there is no national methodology, the methodologists of the academy should prepare one.

CONTRIBUTIONS

1. Important components in the management of football schools and academies in Bulgaria were studied using a survey method. In the survey, 110 coaches across the country were given the opportunity to share the real state of the clubs they work for.
2. In the interview with experts, the persons occupying executive positions were able to examine the management model proposed by us. The results of the interview showed that the level of professionalization is in the range from low to average.
3. The football academy management model is accepted by the participants in the study, who consider it applicable, realistic and efficient.

**Publications
related to the dissertation work**

1. **Великов, А., Исмаил, Дж.** (2022). Сравнителен анализ на комуникационните подходи при подрастващи футболисти. *Годишник на Национална спортна академия „Васил Левски“*. Том 2, 253 – 264.
2. **Великов, А., Исмаил, Дж.** (2023). Антропометрични изменения при подрастващи футболисти след кондиционни занимания, *НМС Спорт и наука, брой 1*, 2, 68 – 74.
3. **Великов, А., Исмаил, Дж.** (2024). Скоростни изменения при подрастващи футболисти, *XV МНК „Съвременни тенденции на физическото възпитание и спорта“*, Университетско издание „Св. Климент Охридски“, 260 – 268.