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Doctoral (PhD) Dissertation Thesis

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**Pedagogical characteristics of talent development of youth football players
in Hungary and in neighboring countries**

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Introduction

Football is popular in almost every country in the world, including Hungary, but of course the enthusiasm and mood of the fans is strongly influenced at both national or club level by the results of their favourite team. Among all sports, the Fédération Internationale de Football Association (FIFA) has the largest number of member associations, 211.

In recent years, the performance of Hungarian national adult and youth football teams has repeatedly approached the level of the international elite. This is proven by the fact that the adults qualified for the European Championship in 2016 and 2021, and the young Hungarian talents took part in world junior championships in 2009, 2015 and 2019. However, despite these excellent results, there are very few players in the adult national team who play in top European tournaments (Kiss et al., 2021).

In Hungary, there is an academy system that has the key role in the development of football talent (Vincze et al., 2011). A few years ago, football academies were also set up across the border with the organisational and professional support of Hungary, providing high-quality training for young ethnic Hungarians living in neighbouring countries.

Football talent management is a complex process, the success of which is influenced by a number of factors, personality factors being one that help talented football players realize their potential (Williams and Franks, 1998). To raise the quality of football, consciousness is required in developing young athletes, and in this process, the more analysed factors are motor, anthropometric, physiological, psychological ones, but pedagogical views also play an important role (Csáki et al., 2013).

In order to sustain high performance in the long term, it seems essential to develop the sport science knowledge of coaches working with football talents, as well as to raise awareness of their pedagogical role. It is therefore a priority for professionals working in academies to communicate pedagogical values to young talent, both professionally and outside of that sphere, because in the long term, educated personalities have a better chance of achieving sport success.

Aims

Research aims

The research studies the opinions of junior coaches, young football players and their parents on the process of talent management, with special emphasis on pedagogical factors, based on the findings of empirical research conducted at seven state-recognised football academies in Hungary and three cross-border football academies. It also aimed to present the similarities and differences between the academies concerned, in terms of variables by coaches,

parents, athletes and age group, and through comparisons between the countries. Through this, the work aims to enhance the effectiveness of talent management for Hungarian and foreign youth football players and for coaches in their professional and pedagogical work.

Hypotheses

Factors influencing future success in adult football

(H₁): My hypothesis is that coaches, athletes and parents value the role of professional factors the most.

Coaches' influence on players' lives outside of sport

(H₂): My hypothesis is that coaches, athletes and parents believe that coaches are less likely to be attentive to factors related to athletes' healthy lifestyles and their education.

Coaches' decisions regarding a player's participation in a match

(H₃): My hypothesis is that coaches, athletes, and parents hold the view that coaches make their decisions based on the behaviours and activities they observe during training.

Factors outside sport that influence the development of young players into educated individuals

(H₄): My hypothesis is that coaches, parents, and athletes consider statements related to sport, but not as a professional task, to be the most relevant factors.

Factors affecting the success of the careers of youth football coaches

(H₅): My hypothesis is that coaches and parents emphasize professional and training theory most.

With regard to the variables measured

(H_{6a}): My hypothesis is that there is a difference between the values of coaches, parents and athletes

(H_{6b}): My hypothesis is that there is a difference between the values of coaches, parents and athletes in Hungary and abroad

(H_{6c}): My hypothesis is that there is a difference between the values of Hungarian and cross-border peers

Experience of the respondents

(H₇): My hypothesis is that coaches, parents and athletes have different opinions in the areas within and outside of sport.

The key elements of the regulatory documents

(H₈): My hypothesis is that the form and content of the documents containing the educational and training objectives of the academies are heterogeneous.

Methods

Sample studied

The research was carried out in seven flagship football academies in Hungary and three cross-border academies in the Hungarian-speaking regions of Romania, Slovakia and Serbia, which make up Hungarian-speaking sample. The cross-border academies are talent development centres abroad supported by the Hungarian Government.

In the research I interviewed junior players of four different age groups (U-15, U-16, U-17, U-19), parents of youth football players of the four age groups and the coaches (head coaches, assistant coaches, strength and conditioning coaches, video analysts, goalkeeper coaches) working with them.

At the time of the survey, not all academies had all of the above five posts filled for each age group. Thus, the responses of 79 coaches at the national academies could be collected and processed. The total sample of coaches at cross-border academies was 21, only ethnic Hungarian coaches participated in the survey. The questionnaire for parents was answered by 317 Hungarian parents and 94 ethnic Hungarian parents living in neighbouring countries. The questionnaire for young footballers was answered by 449 Hungarians and 165 ethnic Hungarians living in neighbouring countries.

The academies in the sample were represented by a professional manager, a footballer and a parent of the footballer in the semi-structured interviews. Thirty people responded to the interview questions.

Data collection

Questionnaire

To measure the variables in the survey, I designed a tailor made questionnaire. At the beginning of the research, a pilot was carried out at one of the academies of excellence, and following that, it was decided to use the questionnaire unchanged in content or format.

I used a questionnaire method with closed-ended questions. Coaches, parents and players were asked to indicate their level of agreement with a given statement on an attitude scale of 33, 10, 7, 13, 13 statements: a value of 1 indicated full disagreement with the question or definition, and a value of 4 indicated full agreement with the statement.

Interview

In order to get a more complex picture of the study as a whole, I used qualitative techniques such as semi-structured interviews and document analysis to supplement the questionnaire survey.

Document analysis

The aim of the document analysis was to gather more information on the extent to which academies consider the transmission of values related to the education of young footballers, the formulation and implementation of educational objectives and principles as significant factors.

As a source, I analysed documents whose title suggested they could include elements of pedagogical content relevant to the education of young footballers.

Data processing

Descriptive statistical procedures were used, as well as a one-way ANOVA test to find whether there is a statistically detectable difference between the views of coaches, parents, athletes and age groups in Hungary and abroad. I also wished to find which subsamples or age groups were outliers by using Fisher's LSD (Least Significant Difference) Post Hoc test. To determine differences and similarities between Hungarian and cross-border age groups and to compare the views of all coaches and parents, a parametric two-sample T-test was used. Multivariate discriminant analysis was performed to determine whether the variable values indicate belonging in a particular group.

SPSS 25.0 statistical software was used for data processing and analysis. The level of significance was the 5% margin of error ($p < 0.05$), the most commonly used in social sciences; and I interpreted confidence interval below 1% ($p < 0.01$) as a strong level of significance.

For the semi-structured interviews, I used a priori coding in addition to manual data processing.

In the document analysis, I grouped the documents on pedagogical processes according to whether they were related to public education institutions and, if so, to which type. This resulted in six categories. The analysis focused on content (educational objectives, tasks) and form (document structure, length).

Findings

Analysing the factors impacting if a young athlete becomes a successful adult footballer, *positive personality traits demonstrated while doing sport* and the *number of hours spent playing football* proved to be of particular importance. Examining the questionnaire on coaches' influence on players' lives outside of sport, it can be concluded that coaches place emphasis on the *dutiful performance of athletes* and pay attention to *their behaviour and conduct*. The questionnaire on the role of factors influencing coaches' decisions to let a footballer play in a match revealed that the highest score was given to *professional factors*, with the most influential factors being *performance at training, attitude to training* and *behaviour during training*. The analysis of the factors beyond sport influencing the development of the young players' personality showed *respectful attitude towards the coach* and *arriving punctually at the training* as factors with outstanding mean scores. The study of the factors influencing the success of coaches' careers indicated that *knowledge of technical and tactical training in football* had the highest mean scores. The responses collected during the interviews confirmed that it is mainly *positive personality traits* that influence the success of talent development. The document analysis revealed that the educational systems of academies is not documented consistently, and the *educational objectives and tasks, usually drafted based on their own ideas*, dominated the publications.

Results of factors influencing future success in adult football

In terms of the internal factors, coaches, parents and athletes ranked the *positive personality traits demonstrated while doing sport* (3.77 ± 0.47) as the most important, while traits unrelated to sport were seen as less significant (3.39 ± 0.67). Respondents also deemed a mastery of technical skills (3.65 ± 0.53) and cognitive factors (3.65 ± 0.53) as important.

The groups believe that success in football is mostly due to the number of hours spent playing football ($M=3.72 \pm 0.50$). The relevance of ranking at the junior championship ($M=2.78 \pm 0.84$) is rejected by all respondents.

The psychological ($M=3.52 \pm 0.63$) and moral support ($M=3.50 \pm 0.63$) of the family yielded high values, while the respondents did not attribute such a significant role to school factors such as realizing their academic potential (2.74 ± 0.77) or academic performance (2.63 ± 0.80).

The lifestyle ($M=3.58 \pm 0.61$) and the inspiring and supportive environment at the club ($M=3.45 \pm 0.63$) were rated as the most important external factors. Respondents were of the

opinion that professional contracts signed before adulthood with either minimum wage ($M=2.20\pm0.87$) or higher wages negotiated ($M=2.19\pm0.92$) do not help young footballers to succeed.

Results of the questionnaire on coaches' influence on players' lives outside of sport

Based on the results of the survey, the respondents' perception of coaches' attitude was that they draw their students' attention to the importance of dutiful performance ($M=3.45\pm0.70$) and address the behaviour and conduct of their footballers ($M=3.37\pm0.72$). The groups also believe that the coaches pay enough attention to some statements on healthy lifestyle, namely that they pay attention to the children's clothing as appropriate to the weather (3.19 ± 0.79).

Results of the role of factors influencing coaches' decisions regarding a player's participation in a match

Based on the views of coaches, parents and athletes, it can be said that the dominance of sporting factors is prominent, as indicated by the high values of the factors of performance during training ($M=3.51\pm0.72$), and the attitude to training work ($M=3.49\pm0.74$). The areas outside sports were scored significantly lower, particularly for behavioural problems at school ($M=2.07\pm0.85$) and poor academic performance relative to ability ($M=1.91\pm0.84$).

Results on the factors outside sport that influence the development of young players into educated individuals

Respectful behaviour towards the coach ($M=3.85\pm0.38$) and arriving punctually at the training ($M=3.75\pm0.47$) were highlighted by the respondents as being the two most important in the process of becoming an educated personality. The school-related components were ranked at the bottom of the list: the respondents did not attach particular importance to the components of school grades reflecting performance for footballers ($M=2.93\pm0.87$) or that footballers' academic requirements should be the same as their non-footballing peers ($M=2.97\pm0.84$).

Results on the factors affecting the success of the careers of youth football coaches

Coaches and parents consider technical ($M=3.77\pm0.46$) and tactical training ($M=3.71\pm0.50$) in football as significant aspects of a successful coaching career. The above mentioned components confirm the relevance of sport science factors, however, the results are more nuanced by the fact that coaches also attach great importance to pedagogical (3.69 ± 0.46), psychological knowledge (3.61 ± 0.51).

Experience of the respondents

During the interviews, all respondents mentioned at least one or two positive personality traits related to **becoming a professional player**. Other opinions also appear in the responses, with some citing family background, others cognitive skills or the role of teammates as significant.

The interviewees stressed that both coaches and their students benefit from **coaches' attention to their players' activities outside sport**, being familiar with the socio-cultural situation of the players' families, with their school life and their progress, and also their insight into the children's private lives, especially the cohesion in the family.

The respondents expressed a strong opinion about the **possibility of young footballers playing in matches**. They put the players' weekly training performance at the top of the list, suggesting that this should be the decisive argument when the coach assigns players to matches.

All interviewees stressed that without the **support of the family**, it can be very difficult for talented children to fulfil their careers.

In terms of **schooling**, the importance of completing one's secondary education was mentioned by the majority of respondents.

Consistency and guidance in regulatory documents

The content of the educational programmes of the public education institutions is very similar, as they were drawn up by the heads of the institutions in accordance with specific legislation. Their heterogeneity shows in the fact that in some documents the units that present guidelines are brief, while in others they are more elaborate. There is a much greater variation in the form and content of documents that were not drawn up in accordance with legislation. These publications usually do not have a uniform structure, and their quality is far below that of the educational programmes of the public education establishments.

Discussion

On the way to becoming a successful adult footballer, *positive personality traits demonstrated while doing sport* is the key factor; coaches also emphasized the *dutiful performance of athletes*. *Professional factors* were highest rated in a coach letting a footballer play in matches. In terms of young players becoming educated individuals, the average value of the response *respectful behaviour towards coaches* was noteworthy, while on the question of career success of coaches, *knowledge of technical and tactical training* in football had the highest average value. The responses collected in the interviews confirmed that it is mainly *positive personality traits* that influence the success of talent development. The document analysis revealed that the documentation of the academies' pedagogical systems is not very consistent, and the *educational objectives and tasks, typically drafted based on their own ideas* dominated the publications.

Factors influencing future success in adult football

(H₁): My hypothesis was that coaches, athletes and parents value the role of professional factors the most. **This hypothesis was only partly proven to be correct** because in the case of the professional factors, in addition to claims about the number of hours spent playing football, the coach's motivating strategies, attitude and professional knowledge, the average values of internal factors were also found to be highly valued, namely positive personality traits while doing sport, technical skills and cognitive factors.

Coaches' influence on players' lives outside of sport

(H₂): My hypothesis was that coaches, athletes and parents believe that coaches are less likely to be attentive to factors related to athletes' healthy lifestyles and their education. **The hypothesis can be accepted**, because factors related to coaches' attitudes towards coaching – such as dutiful performance of tasks and paying attention to the footballer's behaviour and conduct – received the highest mean scores.

Coaches' decisions regarding a player's participation in a match

(H₃): My hypothesis was that coaches, athletes, and parents hold the view that coaches make their decisions based on the behaviours and activities they observe during training. **The hypothesis was confirmed**, as coaches, athletes and parents gave the highest ratings to statements related to sport-specific factors such as performance in training, attitude towards training work and behaviour in training.

Factors outside sport that influence the development of young players into educated individuals

(H₄): My hypothesis was that coaches, parents, and athletes consider statements related to sport, but not as a professional task, to be the most relevant factors. Similarly to the factors of respectful behaviour towards the coach and teammates and punctuality at training, the response of respectful behaviour towards other employees of the association also received high mean scores, so the **hypothesis can be considered partially confirmed**.

Factors affecting the success of the careers of youth football coaches

(H₅): My hypothesis was that coaches and parents emphasize professional and training theory most. **The hypothesis proved to be correct**, as coaches and parents rated the knowledge of technical and tactical training in football with the highest mean scores.

With regard to the variables measured

(H_{6a}): My hypothesis was that there is a difference between the values of coaches, parents and athletes. **The hypothesis proved to be only partially correct**, as in ten cases there was no statistically significant difference between the opinions of coaches, athletes and parents.

(H_{6b}): My hypothesis was that there is a difference between the values of coaches, parents and athletes in Hungary and abroad. **The hypothesis proved to be only partially correct**, as in seven cases there was no significant difference between the Likert scale scores of the responses of Hungarian and cross-border coaches, parents and athletes.

(H_{6c}): My hypothesis was that there is a difference between the values of Hungarian and cross-border peers. **The hypothesis proved to be only partially correct**, as there were twenty-eight statistically significant differences for factors influencing the development into a successful adult footballer, nine for factors of the influence of coaching work on the life of players outside of sport, eleven for factors influencing the coach's decision to let the footballer play in the match, and only one factor beyond sport influencing the development of young players into educated individuals.

Experience of the respondents

(H₇): My hypothesis was that coaches, parents and athletes have different opinions in the areas within and outside of sport. **The hypothesis can only be partially proven**, as there were similar opinions on both professional and non-sporting issues.

The key elements of the regulatory documents

(H₈): My hypothesis was that the form and content of the documents containing the educational and training objectives of the academies are heterogeneous. **The hypothesis can be regarded as confirmed**, as only four academies have their own pedagogical programmes drafted based on the same legal background.

Recommendations, further research directions

I recommend that heads of academies communicate to their coaches that expanding and using their pedagogical tools will help them become a more successful coach, not in terms of success in the youth ranks, but in terms of their students' successful sporting careers.

With regard to documents, the heads of academies that are not self-sponsored public education establishments should consider adapting the form and content of their existing documentation relating to educational processes to the legislation on educational programmes, so as to make the educational principles, objectives and tasks of the academies more consistent.

Further research could compare the experiences of successful and unsuccessful footballers and involve recognised football academies in countries with a sporting tradition and culture different from Hungary's.

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