



# The Role of Coaches in Talent Identification and Development Programs: A Case Study of German Football

Maedeh Alikhani<sup>1</sup> | Zhaleh Memari<sup>2</sup> | Mehri Pouyandekia<sup>3</sup>

1. MSc, Department of Sport Management, Faculty of Sport Sciences, Alzahra University, Tehran, Iran.

Email: [mahya6067@gmail.com](mailto:mahya6067@gmail.com)

2. Corresponding author, Associate Professor, Department of Sport Management, Faculty of Sport Sciences, Alzahra University, Tehran, Iran. Email: [zh.memari@alzhra.ac.ir](mailto:zh.memari@alzhra.ac.ir)

3. PhD Candidate, Department of Sport Management, Faculty of Sports Sciences and Health, Tehran University, Tehran, Iran.

Email: [Mehri.Pouyandekia@ut.ac.ir](mailto:Mehri.Pouyandekia@ut.ac.ir)

## ARTICLE INFO

## ABSTRACT

**Article type:**  
*Original article*

**Article history:**

Received: 13 December, 2023

Received in revised form: 15 February, 2024

Accepted: 8 March, 2024

Published online: 8

December, 2024

**Keywords:**

German Football  
Talent Development  
Talent Management

We have reviewed the coaches' role in German talent identification and development football programs and followed the qualitative meta-synthesis method with Sadowski and Barroso's approach. We verified 56 documents and extracted 695 nonrepetitive open codes and 135 concepts. We showed that coaches' roles in a talent program consists of Competency, Leadership, and Organizational components. Competency components include selection, training, coaching, and performance. Leadership components include Technical and DFB & DFL. Finally, the Organizational components comprise the Double Pass, coordinators, and DFBnet. Properly organizing and equilibrium between these three parts can leverage and lead to successful coaches and the program. According to the critical role of talent programs and coaches in sports development, setting up national TID and TDE programs, especially in sports, are very important. Implementing a large-scale project with various criteria is complex; because it requires high cooperation, mutual understanding, and national determination. Many employees are involved in such systems with instrumental, scientific, experimental, and specialized aspects.

## Introduction

Talent Identification (TID) and Talent Development (TDE) have become increasingly relevant in sports performance (Sarmiento, Anguera, Pereira, & Araújo, 2018). TID is defined as the process of recognizing current participants with the potential to excel in a particular sport. In contrast, TDE is the process of providing the most appropriate learning environment to realize this potential (Williams & Reilly, 2000). The pathway towards senior professional status in sports is affected by many factors (Dimundo et al., 2023). So, TID and TDE programs are also an integral part of pathways in sports and

**How to Cite:** Alikhani, M., Memari, Z., & Pouyandekia, M. (2024). The Role of Coaches in Talent Identification and Development Programs: A Case Study of German Football. *Journal of New Studies in Sport Management*, 5(4), 1304-1317. doi: 10.22103/jnssm.2024.22770.1255



are invested heavily by sporting organizations because identifying and developing players is essential to player and team success and enhanced participation and financial sustainability (Victoria Universities, 2024).

TID traditionally relies on the knowledge and perceptions of expert coaches to identify and predict potential future elite athletes (Roberts et al., 2019). Becoming a senior professional athlete is the ambition of many youths participating in organised youth sports (Dimundo et al., 2023). TID and TDE programs in youth football allow young players to realise their potential (Kelly, 2023). Coaches have a fundamental role in promoting sports participation and increasing athletes' and teams' performance, contributing to athletes' development as people, creating coherent groups, and building shared interest communities (Lara-Bercial et al., 2017). They can also significantly strengthen human and social capital and positively impact young athletes' personal development and upbringing (Orengo, 2017). A good coach's importance is why athletes and teams spend a lot of time and money hunting down the best coaches (Whyte, 2019). Therefore, it can be concluded that coaching training, skills development, and updating are essential, as many organizations and institutions have been established to serve coaches (Memari, Hamidi, & Seyfi, 2013). Besides, coaches are a vital part of football. It enables young people to learn all aspects of the game from an early age, both playing skills and conducting themselves on the football pitch (Trevelyan, 2020).

Countries can develop football in their society through the long-term management of TID and TDE programs. For this reason, such programs have become increasingly popular throughout governing bodies, professional clubs, and independent organizations in elite youth sports (Kelly, 2023). The result of talent is crucial for future success (Grossmann & Lames, 2017). Football coaches consider TID an essential task (Sæther, 2014). The importance of the coach's role and position in TID programs governing professional football has introduced mandatory coaching qualifications for crucial management and coaching positions (PFA, n.d.). Therefore, football associations need to educate their youth coaches at a high level (Schreiner, Daniel, Junginger, Hauser, & Hoener, 2017). In this regard, the World Football Organization's current approach is to develop and promote coaches parallel to the rapid growth of professional football development (Memari, Hamidi, & Asghari Jafarabadi, 2013).

The Football Association initiated TID programs in the late 1990s, eventually leading to the English Premier League introducing the Elite Player Performance Plan in 2012, a long-term strategy aimed at producing a more significant number of talented 'homegrown' young players (Roe & Parker, 2016). It has four essential functions – Games Program, Education, Coaching and Elite Player Performance (Premier League, 2019). One of the core objectives of this program was to develop a world-leading youth coach. The Premier League implements coach development programs with the following initiatives in collaboration with the clubs (Premier League, 2012). This includes the Elite Coach Apprenticeship Scheme (ECAS), an intense two-year program to accelerate the development of coaches currently employed by clubs (Premier League, 2019).

In 2001, the Dutch TDE program was implemented in two steps. One of the primary innovations of this program was the new coaching structure for youth soccer coaches (Poel & Hyballa, 2011). The Dutch FA (KNVB)<sup>2</sup> offers numerous training programs for youth coaches and trainers, including an introductory module, youth trainer and TC III Youth (KNVB, 2020). From the lowest to the elite level, coaches must be licensed, and each club must have at least two or three qualified youth coaches in every age category (Amigone, 2015). In the TDE program, every age group has a coach who can meet the specific needs of that age group (Poel & Hyballa, 2011).

Among the developed countries in football, Germany has revised its TID program. Because the German national team had a catastrophic performance in 1998-2000 (Clapham, 2018), designing and implementing the German TID program began (Ermisvfland, 2014). Since then, the growth and development of coaching standards at various levels, from beginner to the elite, have been one of the German Football Association's essential priorities, the DFB<sup>3</sup>, to implement this program (Cairns, 2013; Chesler, 2013; Kim, 2008). However, the coaching system must be adapted according to a TID management system. The TID and TED programs will not succeed if they are not done in parallel.

<sup>2</sup> The Royal Netherlands Football Association, Koninklijke Nederlandse Voetbalbond (KNVB)

<sup>3</sup> Deutscher Fußball-Bund

Traditional classifications of coaching qualifications cannot lead a country's football to success. Therefore, managers needed to reform and specialize in the coaching system. Then, the collaboration between coaches, TID, and the TED program was revised. The German approach can best be summed up in proficiency and accessibility. Proficiency, firstly, regarding the qualifications of the coaches. Players cannot be developed into top professionals without the right coaching. To ensure the required standard of coaching only coaches with at least a UEFA B-licence (DFB elite youth licence) are in charge of coaching. The second one, accessibility, refers to two aspects. There are enough training bases throughout Germany, and no player must move too far only to participate (Simon, 2015).

Given Germany's successes in enhancing management in this field, the attractiveness of these experiences to other countries, and the importance of the central role of coaches in the program, this study aims to examine how German coaches play their sensitive role in the TID program and how other organizations, institutes, and experts help these coaches to perform their duties to the society. Accordingly, the following research questions were, therefore, proposed:

- 1) What is the prominent role of coaches' competency components in the TID and TDE programs?
- 2) What are the organizational components of the TID and TDE programs?
- 3) What are the coaches' collaborators as leadership components of the TID and TDE programs?

## **Methodology**

This study conducted qualitative research using Sandelowski and Barroso's meta-synthesis method. Qualitative meta-synthesis is an intentional and coherent approach to analyzing data across qualitative studies (Erwin, Brotherson, & Summers, 2011). The steps taken to collect and analyze the data were followed:

### ***Adjusting research questions***

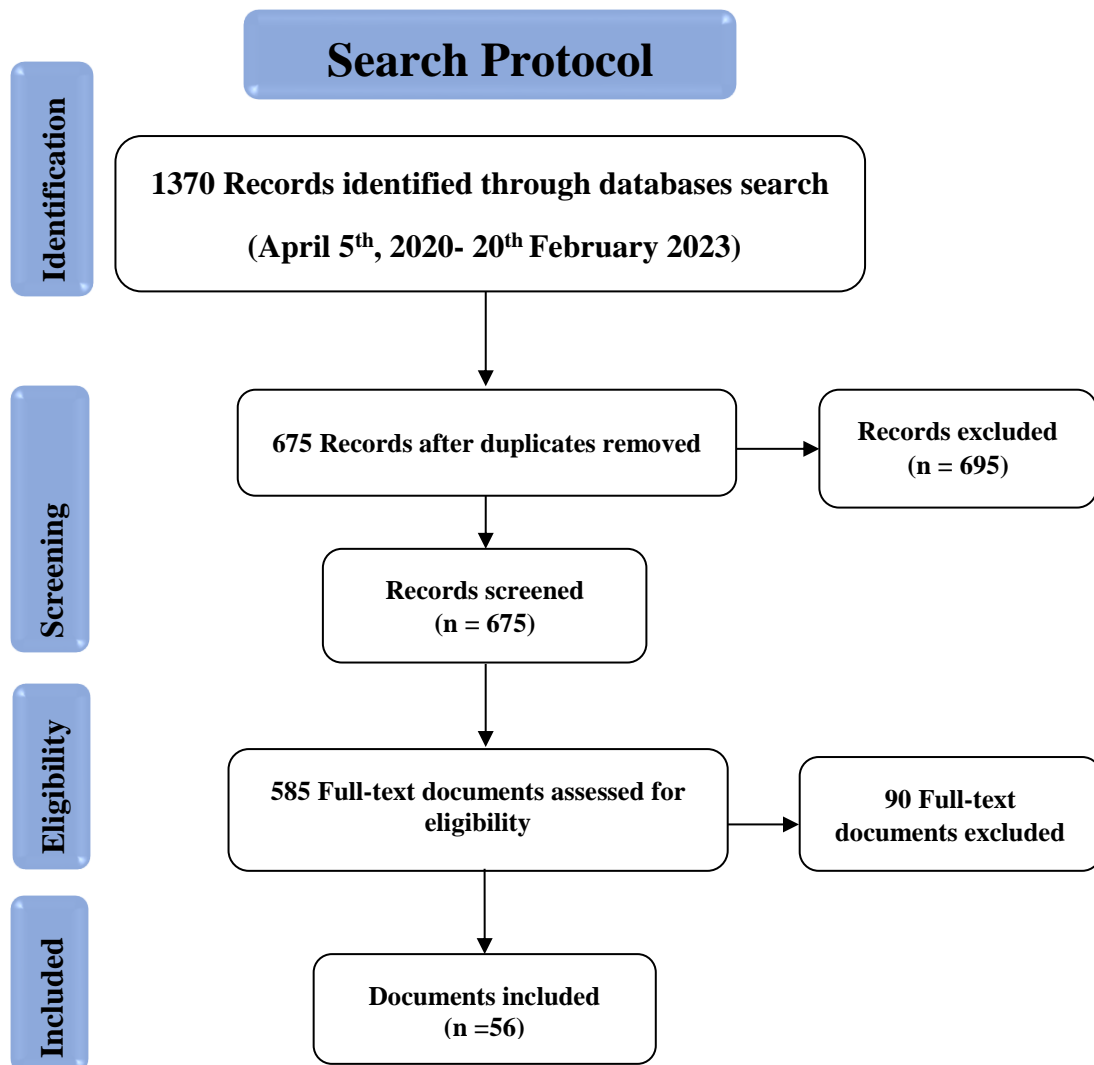
The research questions are designed to find explanations for the antecedents, attributes, and outcomes of processes (Sandelowski & Barroso, 2007). Then, the parameters for the search are identified. They include what (studying the coaches' role in the TID program), who (the scanned documents), when (papers published between 2000 –2023 searched), and how (the six-stage meta-synthesis approach used). These parameters constitute this research's inclusion and exclusion criteria (Sandelowski & Barroso, 2007). The documents published since the beginning of German coaches' role in the TID and TDE program were then selected.

### ***Systematic literature search***

The authors created a search strategy that combined terms related to the study topic (Fingeld-Connett, 2018). They included 'German TID and TDE Program', 'DFB Coaching Qualifications', 'Coaches', 'Coordinators', 'DFBnet', 'DFB Regional Bases', 'Performance Centres', 'Youth Academies', 'DFB Mobile', 'Football Schools', 'Elite Schools', 'Regional/State Association', 'IFX Academies', 'Double Pass'. These terms were then searched for in the Web of Science database, Science Direct, Google Scholar, and Google.

### ***Screening and selecting appropriate documents***

The primary search occurred on April 5, 2020, and database searches obtained 1370 Records (Figure 1). All TID-related documents on sports (Coach, TID, TDE) were reviewed in the first stage. Those that were not relevant to football were removed. Following the initial screening and selection procedure, 675 documents were retained. The 585 screened documents about the German TID and TDE program were investigated in the second stage. Any documents that did not match the research purpose were discarded. Therefore, 56 records were included in the synthesis and analyzed. Figure 1 presents the meta-synthesis review flow chart of the study:



**Figure 1.** Meta-synthesis review flow chart of the study (Moher, Liberati, Tetzlaff, & Altman, 2009).

### ***Analyzing and synthesizing the qualitative findings***

At this stage, the documents via a three-stage analysis process comprising open codes, selected codes (concepts), and theoretical codes (categories) based on the grounded theory method (Corbin & Strauss, 2008). Each document was first assigned a number before inductive line-by-line coding was undertaken. For all the information in each document, one code is used. The next stage identifies concepts as semantically different or similar, and the codes split or merged. The codes were then further refined and grouped according to conceptual similarities to produce defined concepts before similar codes were grouped into categories. Figure 2 shows that a low amount of new data related to the topic was found in the final document checking. Therefore, the researchers concluded that further document reviewing had no more knowledge on the research topic, and the process was discontinued. VOSviewer software was used to visualize the bibliometric networks and word clouds.



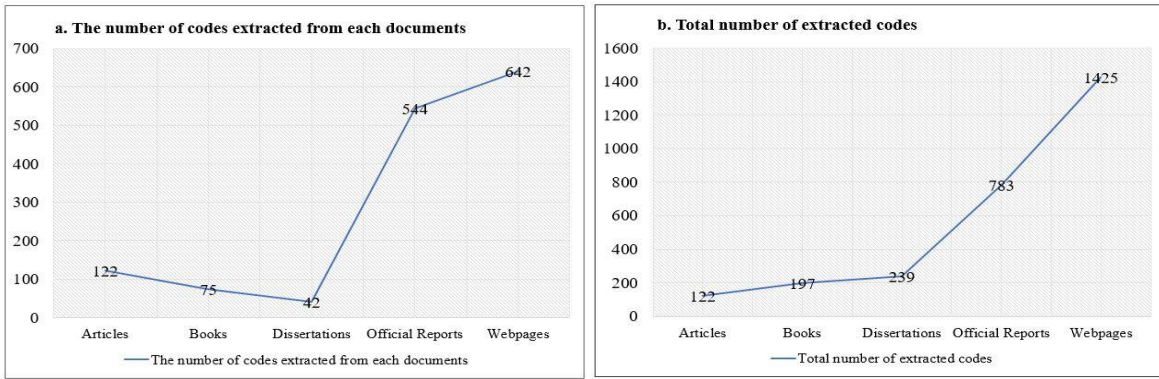


Figure 2. The number of new codes extracted from documents (Frequency left chart/ cumulative frequency right chart).

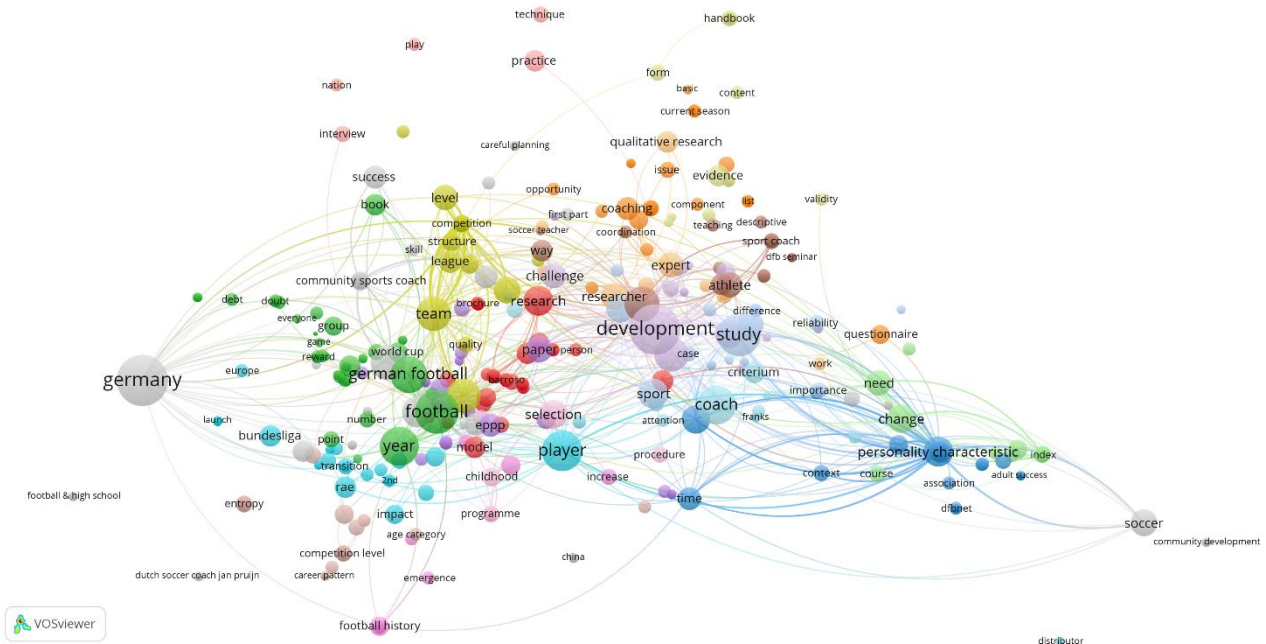


Figure 3. Word cloud information on the role of coaches in the TID and TDE programs.

**Validity**

The validity mechanism includes (a) the maintenance of an audit trail, (b) ongoing negotiation of consensual validity, and (c) expert peer review (Sandelowski, 1998) (See table 1).

**Table 1.** Procedures to Optimize Validity in Qualitative Research Synthesis Studies (Sandelowski & Barroso, 2007).

Type of validity	Descriptive	Interpretive	Theoretical	Pragmatic
Procedure	●			
Use of all search channels of communication	●			
Contact primary study investigators	●	●		
Consult with reference librarians				
Consult with experts in research synthesis			●	
Consult with clinical experts	●			●
Independent searching by at least two reviewers	●			
Independent appraisal of each report by at least two reviewers	●	●		
Weekly research team meetings to discuss search outcomes and to formulate and refine search strategies	●			
Weekly research team meetings to discuss the appraisal outcomes and to formulate and refine study appraisal strategies	●	●		

Type of validity	Descriptive	Interpretive	Theoretical	Pragmatic
Weekly research team meetings to establish areas of consensus and to negotiate consensus in areas and cases of dispute	•	•	•	
Documentation (audit trail) of all procedures, changes in policy and results; individual and group think-aloud sessions	•	•	•	•

A key mechanism for maximizing theoretical and pragmatic validity is expert peer review. The procedures and outcomes are continually scrutinized and critiqued by persons with the requisite research expertise (Sandelowski & Barroso, 2007). To confirm our proposed model, it was reviewed by three experts.

**Quantitative research part**

Shanon Entropy was used to calculate each actor's grade of importance in the model. This method measures the amount of information in a variable (Vajapeyam, 2014) and essentially quantifies the report of a quantity with its specific distribution (Ma & Ma, 2018). The number of open codes in proportion to each document and their repetition counted. Then, each one's significance is calculated using each actor's information load and equations (1) and (2).

$$\text{Formula (1): } E_j = -K \sum_{i=0}^n (P_{ij} * \text{LN } P_{ij}) \quad i = 1, 2, \dots, n \quad K = \frac{1}{\ln(n)}$$

$$\text{Formula (2): } W_j = \frac{d_j}{\sum d_j} \quad d_j = 1 - E_j * 100$$

Shanon Entropy, a quantitative method, was used to verify the qualitative part. This method put out a quantitative report from qualitative results and has also been used to validate the findings. By this part, we can conclude the weight of actors and the researched documents' emphasis on their role in the TID and TED program.

**Results**

The results were obtained after carefully reviewing 56 selected documents, 1,425 repetitive open codes (695 nonrepetitive), and 135 concepts (See Table 2). Table 3 presents the results of each actor's coefficients; Government, DFBnet, and football schools have the most actual ranks, respectively. This rating means that the codes of these actors in all studied documents have distributions.

**Table 2.** Concepts derived from the analysis.

Category	Concepts	Authors (Date)
Role of Coaches in TID and TDE Programs	DFB takes actions	Bender, Schild, and Schweizer (2011), Mendonça (2014), (Simon, 2015), (DFB, 2015a), Chesler (2013), Kim (2008), (Abraham, 2018), (Alagic, 2017), DFB (n.d), DFB (2014), Stöber (2017), Fundação Real Madrid (2014), Ermisvfland (2014), Cairns (2013), Hesse (2016), Hackbarth et al. (2013), DJW (2011), Price (2015), Güllich (2014), Feichtinger (2015)
	The Federation of German Football Coaches (BDFL)	Bender et al. (2011), Mendonça (2014)
	Coach Licensing	Chesler (2013), (Alagic, 2017), Honigstein (2015)
	Hiring prerequisite coaches for club licensing	Bender et al. (2011), Mendonça (2014), Chesler (2013), Güllich (2014), Kim (2008)
	DFB regional bases' coaches	Price (2015), (Abraham, 2018), ESTO (2017), (Alagic 2017), Norman et al. (2015), Dieker (2017), Malone (2014), Rose (2016), Kim (2008), (Simon, 2015), Schmidt and Stegmann (2016), (Weiss, 2013)

Category	Concepts	Authors (Date)
	Regional/state associations' coaches	DFB (n.d), DFB (2014), Fundação Real Madrid (2014)
	Using experienced coaches and managers	Bender et al. (2011), Mendonça (2014), (Abraham, 2018), Güllich (2014)
	Hiring skilled professional coaches at the academies of the licensed football clubs	Bender et al. (2011), Mendonça (2014), (Abraham, 2018), Güllich (2014), Chesler (2013), Whitney (2013), Norman et al. (2015), Kim (2008), (Alagic 2017)
	Performance centres' coaches	DFB (n.d), DFB (2014), Fundação Real Madrid (2014), Hackbarth et al. (2013)
	Coaches' duties	Schmidt and Stegmann (2016), Kim (2008), (Alagic, 2017), (Abraham, 2018), Grossmann, Lames, and Stefani (2015), DFB (n.d), Fundação Real Madrid (2014)
	Number of German licensed coaches	Bender et al. (2011), Mendonça (2014), ESTO (2017), (Alagic, 2017), James (2013), Cairns (2013), Kim (2008)
	DFB-Mobil	Grohmann (2014)
	Holding coaching conferences	Chesler (2013), Englisch et al. (2016)
	DFBnet and evaluating coaches	DFB (n.d), DFB (2014), Fundação Real Madrid (2014), Stöber (2017), DFB (2013), DFB (2016)

**Table 3.** Importance and priority of the actors.

Actors	Wj	Rating
Government	10.05	1
DFBnet	8.7	2
Football schools	5.6	3
National and club coordinators	5.28	4
Regional/state associations	5.20	5
Collaboration between organization	5.19	6
Ministry of schools	5.17	7
Coach and trainer licences	5.08	8
German TID and TDE program	4.8	9
Performance centres	4.5	10
DFB regional bases	4.3	11
Revised coaches' system	3.84	12
Competition levels	3.83	13
DFB and DFL	3.7	14
Coach support system	3.4	15
Academies	3.02	16
Double Pass	2.8	17
Clubs	2.2	18

The findings concerning the research questions are presented respectively:

**(1) What is the prominent role of coaches' competency components in the TID and TDE programs?**

The German TID and TED programs give equal opportunities to talents. Players need an expert coach in the same age group who is trained and closely correlated to other program elements for each age group. Therefore, they can guarantee the success of this program (Kim, 2008; Norman et al., 2015).

**1-a, b, c) How do German coaches play their selection, training, and coaching roles in the program?**

Coaching selection is divided into two steps, including a) DFB regional bases and b) performance centres, respectively:

1) *DFB regional bases*: During the first stage, DFB established 366 DFB regional development bases nationwide with the leading 29 coordinators (Sotiriadou & De Bosscher, 2013) to receive coaches' abilities (Kulish, 2012). One thousand three hundred coaches supervise groups with DFB standard qualifications (Honigstein, 2015). Each DFB region has DFB some coaches providing continuing professional development for clubs in their region (DJW, 2011). It raises players' skills and tactical education noticeably (Han, 2016; Schmidt & Stegmann, 2016) and describes a bridge between the indispensable youth training effort made by club coaches at the grassroots on the one hand and the professional clubs' academies and elite football schools and their coaches (Alagic, 2017).

2) *Performance centres*: Promising players whom the DFB identifies coaches on a regional basis and invites to attend youth performance centres of Bundesliga clubs (DJW, 2011). The coaches' training plan specifies different age groups (Norman et al., 2015). Also, it has unique and professional coaches for other age groups of players (Schmidt & Stegmann, 2016). Coaches in this structure hope to provide late-developing players with the time and support needed to reach their potential (DJW, 2011).

3) *Elite football schools*: Each elite school is part of a larger organizational framework consisting of schools, academies, regional/state associations, and clubs (Naglo, 2020); this ensures optimal coordination of all areas coaches and infrastructure, which accompany and promote talent (BVB, 2017). In these schools, coaches coordinate the players' academic and athletic concerns (DFB 2014b). Regarding coaches, these studies conclude that the role of coaches in successful talent environments goes far beyond training the athlete. The vital part of the coach is establishing and maintaining the right culture within the talent environment and helping introduce new members into this culture (Skrubbeltrang, Olesen, & Nielsen, 2021).

In elite football, schools characterize strength and weakness profiles for each player, and coaches can work according to them, whether athletic or tactical (Price, 2015). The close relationship between athlete and coach can also lead to either party feeling let down if the other party's commitment to developing talent ceases (Skrubbeltrang et al., 2021). Coaches are the most critical influence on athletes' perception of the motivational climate to shape the learning environment (Reinboth & Duda, 2006).

4) *Youth academies*: The academies provide gainful employment to some full-time and part-time coaches (Norman et al., 2015). The best coaches have worked at the clubs' academies, educating and supporting young teams' talents (Bender et al., 2011). The highly qualified youth academy coaches have honed the skills of these young players, giving them the support they need to debut in professional football (Bacher et al., 2009). Besides contribution, online training is the centerpiece of the service portal. They are training live, featuring a video sequence of specific drills and routines. This allows youth coaches to understand better and implement the exercise (Norman et al., 2015).

In this program, German coaches have catered comprehensive support to players, including additional training in school classes, content and quantity/intensity of training, and flexible rules regarding schooling routines during absences for sporting reasons (BVB, 2017; Englisch et al., 2016). Every player receives individual attention from the coach (Bender et al., 2011). It is critical to developing players of all ages that they receive personal attention from the coach.

*1-d) How do German coaches play their performance assessment role at all league levels of the program's competitions?*

One of the coaches' goals in this program is to develop players to reach a professional level and help national teams. Coaches have allowed players aged 7–23 to compete in their age groups and gain the knowledge necessary to play in professional leagues (Abseits, n.d.; Votteler & Höner, 2017). To this end, there is a collaboration between amateur, semi-professional, and professional clubs with the DFB, DFL, national youth teams, youth academies, DFB regional bases, performance centres (Chesler, 2013), provincial/state associations (Fundação Real Madrid, 2014; Lu, 2017), and IFX (IFX, 2018) to support the elite players and their coaches to success. Furthermore, DFB coaches and their assistants have regularly observed players from the regional youth leagues and do their roles during league, cup matches, and tournaments (DFB, 2015a).

**(2) What are the organizational components of the TID and TDE programs?**

In the program, there are three organizational components, including DFBnet actions, coordinators, and Double Pass:



*2-a) What are the DFBnet efforts to improve coaches' training role in the program?*

The DFBnet modules for the national and selection teams help coaches and team managers prepare, process, and document international matches or training courses (Norman et al., 2015). From training assistants at the club level to the highest coaching qualifications (DFB, 2013). These licensing systems interface with accounting systems, the DFB regional bases, and the corresponding coaches and integrate direct debiting (DFB, 2016). Besides, all Information on coaches and promotion DFB regional bases' tests can be maintained (DFB, 2013). Also, professional coaches provide players with training and support through modules designed by DFB and DFB to progress (DFB, 2016). Management of the A national team and junior representative teams, support for talent promotion, and process support for coaches' basic/advanced training are DFB benefits from DFBnet (DFB, 2013).

*2-b) What is the 29 coordinators' role in cooperation with the coaches?*

The DFB hired 29 full-time base coordinators responsible for the program's organization (Rose, 2016). They have usually experienced coaches who work closely with the sub-regional association and the coaches to ensure smooth operation and communication to define a unified training and playing philosophy right down to the grassroots (DFB, 2015c) and support the base trainers during the training units and give them specific suggestions for improvement (Englisch et al., 2016). They also look after the youngest national associations' teams as primary and secondary coaches. Besides club visits and meetings with fellow coaches, he travels to games and tournaments for viewing purposes (DFB, 2019).

*2-c) What is the Double Pass's role in promoting the TID and TDE program of the coaching license system?*

Following implementing the German TID and TDE programs in partnership with Double Pass, the Foot Pass project was launched to appraise club academy and coaches' performance and licensing (Van Hoecke, Schoukens, Simm, & De Bosscher, 2009). This includes employing full-time young coaches and meeting the criteria for coaching qualifications, forming one team each from the U12–U19 age group (Schmidt & Stegmann, 2016), and employing several coaches and physicians (Hesse, 2016). For clubs to hire full-time qualified youth coaches. When club managers tend to grade their academies, coaches and other software and hardware must update their licences to earn higher grades and receive more funding (Price, 2015). Most academies have increased the minimum licensing standard and implemented an advanced, supplemental, continuous coach development program (Chesler, 2013). Clubs simultaneously built academies and spent much money training young players, and highly skilled coaches were employed (Bender et al., 2011). The above activities are under observation in the Double Pass.

**(3) What are the coaches' collaborators as leadership components of the TID and TDE programs?**

We explain the DFB coordinating and technical actions for development coaches in this program:

*3-a) How does the DFB coordinate its leadership component to increase coaches' positive results in the program?*

From 2002 to 2003, the DFB started restructuring the coaching TID program (Hesse, 2016). Therefore, the opportunities for scouting and coaching young players in amateur games increased (Hesse, 2016). Besides the growth and development of coaching standards at different levels (Cairns, 2013), sports development from beginners to elites is one of the other essential priorities of the DFB in implementing the TID program (Chesler, 2013). Since the education players' experts are the DFB strategy (DFB, 2015a), to promote talent, millions are invested in basic training and fee-based coaches (Bacher et al., 2009; Price, 2015). The coaches must improve themselves constantly. So, they regularly attend courses and seminars organized by the DFB to advance their know-how and expertise (Norman et al., 2015).

*3-b) How can coaches develop their performances through the DFBs' technical actions in the TID and TDE programs?*

The DFB determined new levels for coaches' licenses. It has hired specialized and compatible coaches for players at different activity levels. Various basic qualifications such as C-trainer - grassroots football (Norman et al., 2015) or, as a preliminary license stage, the "team leader" for children, young people, adults, or for leisure and popular sports are subordinate to the hierarchy (DFL, 2019).

## Discussion and Conclusion

Nowadays, sports have become more attractive and popular. Setting up a system has never been easy, especially in sports. Many employees are involved in such systems with instrumental, scientific, experimental, and specialized aspects. The diversity of elements, factors, divisions, players' tastes, coaches, cultures, professionals, and managers adds to this complexity. In the study, the target was the football talent program and the coach's role as a central point in this system. Their responsibility is becoming more challenging when it has many technical, cultural, political, economic, and social aspects. Implementing a large-scale project with many criteria and standards and, therefore, economic dimensions in a country is complex because it requires high cooperation, mutual understanding, and national determination. While understanding this program's nuances and complexities, we believe that the Germans' discipline and collaborations between the sectors and all the people who participated in this program have considerably contributed to the lasting results (Englisch et al., 2016; Kim, 2008; Lu, 2017). Undoubtedly, the only coaches cannot do this complicated program and need many kinds of collaborations with other organisations (Hackbarth et al., 2013; Norman et al., 2015). They are organizational components such as DFBnet, Double Pass, and 29 Coordinators. Also, according to Güllich (2014), leadership components such as DFB and DFL and technical observers and mentors are active in the program (Güllich, 2014). Furthermore, competency components are where coaches help and collaborate with the program. But coaches have a prominent role in such programs (Alagic, 2017; Kim, 2008). The promotional and educational systems and mentoring sections would educate and prepare coaches to accept their critical roles (Bender et al., 2011; Chesler, 2013; Kim, 2008; Simon, 2015).

The results of the program include the training of professional coaches, training aids for regional youth coaches (Fundação Real Madrid, 2014); investment in coaching skills development (Bacher et al., 2009); and support of coaches' regional clubs (Stöber, 2017). It also includes improving coaching standards at all levels (Simon, 2015, March 26), nurturing special educators for different ages (Cairns, 2013), and hiring skilled professional coaches to train the principles of the modern game to young players (Hackbarth et al., 2013; Hesse, 2016; Stöber, 2017). This program runs in Germany with many experts and organizations (Hackbarth et al., 2013; Kim, 2008; Norman et al., 2015). Suppose managers can intelligently use the Germans' experience in this program and customize it according to their country's conditions. They can benefit from modelling this successful program in their country's football development and growth.

The Germans have generously made all their executive management program available to researchers. In this regard, we are grateful to the managers and planners of this program. Doing so paved the way for other researchers to use these sports development experiences.

### *Limitations and future research*

The sensitivity and complexities of sports coaching from the technical, physiological, and psychological aspects, along with the increasing popularity of sports, have made amateur and professional sports coaching attract more people. The unique features of sports are that coaches must acquire various communication and management skills and training technical and specialized skills. On the one hand, the special competitive and emotional conditions of sports, the other hand, make it necessary to have more consideration for sports coaching and the skills that they must acquire to succeed in this job. So, researchers need to do more investigations into this profession. Germans have generously made all their executive management program available to researchers. In this regard, we are grateful to the managers and planners of this program. Doing so paved the way for other researchers to use these sports development experiences. We propose that the following researchers study the social and cultural aspects of the country competitions.

We had some restrictions to doing this study because we couldn't find many managerial sources or scientific journals about sports coaches. Most of the research seems to be related to physiological and psychological studies. Therefore, we suggest paying more attention to the vital role of sports

coaches while paying more attention to the education and development of the model presented in this research to conduct more studies in sports coaching from a managerial perspective.

Indeed, the current research and the documents used to achieve this research focused on German football. It seems that it can be cautiously suggested for other sports. For this purpose, it is recommended that future researchers conduct more studies on other sports to identify and introduce the possible differences between different sports and football.

## Ethical Considerations

### *Compliance with ethical guidelines*

Ethical points have been observed.

### *Funding*

No specific financial resources have been used.

### *Authors' contribution*

All authors have contributed to the design and implementation of this study.

### *Conflict of interest*

There is no conflict of interest.

## Acknowledgments

We would like to give special thanks to all the participants in this study.

## References

- Abraham, S. (2018, April 23). Made in Germany: DFB, decided to revamp their game through the youth system - The Economic Times. Retrieved from <https://economictimes.indiatimes.com/news/sports/made-in-germany-dfb-decided-to-revamp-their-game-through-the-youth-system/articleshow/59730031.cms?from=mdr>
- Abseits. (n.d.). League structure in Germany - Abseits Guide to German Soccer. Retrieved from <http://www.abseits-soccer.com/germany.html>
- Alagic, A. (2017, July 5). German football is reaping the rewards of their football strategy - Amir Alagic's blog. Retrieved from <https://xtratime.in/german-football-is-reaping-the-rewards-of-their-football-strategy-amir-alagics-blog/>
- Amigone, M. (2015). Dutch Soccer Coach Jan Pruijn Shares Secrets from His Years Training Youth Players. Retrieved from <https://acis.com/blog/dutch-soccer-coach-jan-pruijn-shares-secrets-from-his-years-training-youth-players/>
- Bacher, J., Bender, T., Henzler, H., Hieronymus, H., Müller, C., Rapp, A., . . . Wilson, J. (2009). *DFL-Report-2009*. Retrieved from Germany: <https://media.dfl.de/sites/3/2018/11/dfl-report-2009-en.pdf>
- Bender, T., Schild, T., & Schweizer, H. (2011). *10 Years of Academies - Talent pools of top-level German football.pdf*. Retrieved from <https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnx0b3Jnc2FoYWl1a2VufGd4OjYzMjE5NzZmZDRmNWVhY2I>
- BVB. (2017). BVB partners are "Elite Football Academies". Retrieved from <http://www.bvb.de/eng/News/Overview/BVB-partners-are-Elite-Football-Academies/>
- Cairns, M. (2013). 13 years in the making - Why German football is on top of the world. Retrieved from <https://www.coach-logic.com/blog/why-german-football-is-on-top-of-the-world/>
- Chesler, D. (2013). *2001-2013 The Evolution of Youth Academy Programs*. Retrieved from US: <http://resources.ussoccer.com/n7v8b8j3/cds/Email/131106-TECHNICAL-SUMMARY-ICS-GERMANY-Chesler-v.1.pdf>
- Clapham, A. (2018). How Germany became an example to the world of football. Retrieved from <https://thesefootballtimes.co/2016/04/16/how-germany-became-an-example-to-the-world-of-football/>
- Corbin, J., & Strauss, A. (2008). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, California, United States: SAGE Publications.

- DFB. (2013). *Dfbnet Broschuere*. Retrieved from Germany: <https://www.dfb.de/fileadmin/dfbdam/25700-DFBnet-Broschuere-Neuaufgabe-2013-EN.pdf>
- DFB. (2014). *DFB Youth Development Program*. Retrieved from Germany: <https://www.slideshare.net/PedMenCoach/dfb-youth-development-programme>
- DFB. (2015). *DFB-Seminar "Football worldwide experiences in economic, education and social actions"*. Retrieved from Brazil: <https://www2.camara.leg.br/atividade-legislativa/comissoes/comissoes-temporarias/especiais/55a-legislatura/reformulacao-da-legislacao-do-esporte/documentos/audiencias-publicas/jennifer-schroder>
- DFB. (2015, October 22). Talent Development Programme :: Projects :: DFB - Deutscher Fußball-Bund e.V. Retrieved from <https://www.dfb.de/en/projects/talent-development-programme/>
- DFB. (2016). *DFBnet and FUSSBALL.DE*. Retrieved from [https://www.dfb.de/fileadmin/user\\_upload/DFBnetBroschuere\\_ENG\\_FINAL\\_WEB.pdf](https://www.dfb.de/fileadmin/user_upload/DFBnetBroschuere_ENG_FINAL_WEB.pdf)
- DFB. (2019, August 13). FAQ on Base Coordinators. Retrieved from <http://www.dfb.de/news/detail/faq-zum-thema-stuetzpunktkoordinatoren-202068/>
- DFB. (n.d). *Talent Development in the German Football Association*. Retrieved from
- DFL(Deutsche Fußball Liga GmbH). (2019). The way to become a soccer teacher. Retrieved from [https://www.bundesliga.com/de/bundesliga/news/der-weg-zum-fussball-lehrer\\_0000122679.jsp](https://www.bundesliga.com/de/bundesliga/news/der-weg-zum-fussball-lehrer_0000122679.jsp)
- Dieker, A. (2017). Youth Development in Germany: The Structure that won World Cup 2014. Retrieved from <http://www.eifsoccer.com/articles/youth-development-germany/>
- Dimundo, F., Cole, M., Blagrove, R. C., Herbison, J. D., Turnnidge, J., Till, K., . . . Kelly, A. L. (2023). Talent identification and development in an English Premiership rugby union club: the perspectives of players and coaches. *Frontiers in Sports and Active Living*, 5, 1120033. doi:10.3389/fspor.2023.1120033
- DJW. (2011). Why Germany is so successful with Youth Development. Retrieved from <http://forum.rangersmedia.co.uk/topic/202941-why-germany-is-so-successful-with-youth-development/>
- Englisch, J., Schott, U., Hink, W., Köttker, R., Ullrich, H., Strich, D., . . . Paepke, J. (2016). *European sport policy-Overview of sport issues on the EU agenda*. Retrieved from [https://www.dfb.de/fileadmin/dfbdam/125449-EU\\_Sportpolitik\\_E\\_2016\\_web.pdf](https://www.dfb.de/fileadmin/dfbdam/125449-EU_Sportpolitik_E_2016_web.pdf)
- Ermisvfland. (2014). The German Football Masterplan Retrieved from <https://ermisvfland.wordpress.com/2014/04/10/the-german-football-masterplan/>
- Erwin, E., Brotherson, M., & Summers, J. (2011). Understanding Qualitative Metasynthesis: Issues and Opportunities in Early Childhood Intervention Research. *Journal of Early Intervention - J EARLY INTERVENTION*, 33, 186-200. doi:10.1177/1053815111425493
- ESTO. (2017). *ESTO-Germany-Report*. Retrieved from <https://www.estc.info/wp-content/uploads/2017/05/ESTO-Germany-Report.pdf>
- Feichtinger, P. (2015). *Psychological diagnostics in the talent development program of the German Soccer Association: A stepwise procedure to examine the relevance of personality characteristics in talented soccer players*. (Dissertation), Universität Tübingen. Retrieved from <https://publikationen.uni-tuebingen.de/xmlui/handle/10900/67132> Available from publikationen.uni-tuebingen.de
- Finfgeld-Connett, D. (2018). *A Guide to Qualitative Meta-synthesis*. Routledge, 2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN: Taylor & Francis Group.
- Fundação Real Madrid. (2014). German Football Association - Talent Development. Retrieved from <https://www.slideshare.net/PedMenCoach/german-football-association-talent-development>
- Grohmann, K. (2014). Investment, youth planning are secret of Germany success. *Reuters*. Retrieved from <https://www.reuters.com/article/us-soccer-world-ger-success/investment-youth-planning-are-secret-of-germany-success-idUSKBN0FJ1K920140714>
- Grossmann, B., & Lames, M. (2017). Career patterns in German football youth national teams – A longitudinal study. *International Journal of Sports Science & Coaching*, 13(3), 1-10. doi:10.1177/1747954117729368
- Grossmann, B., Lames, M., & Stefani, R. (2015). From Talent to Professional Football – Youthism in German Football. *International Journal of Sports Science and Coaching*, 10, 1103-1114. doi:10.1260/1747-9541.10.6.1103
- Güllich, A. (2014). Selection, de-selection and progression in German football talent promotion. *European Journal of Sport Science*, 14(6), 530-537. doi:10.1080/17461391.2013.858371
- Hackbarth, T., Hildebrandt, A., Hink, W., A. Pilz, G., Rieth, L., Schulte, S., & Tietz, O. (2013). *FOOTBALL IS the FUtUre - DFB*. Retrieved from [https://www.dfb.de/fileadmin/dfbdam/27985-DFB\\_Nachhaltigkeitsbericht\\_ENG.pdf](https://www.dfb.de/fileadmin/dfbdam/27985-DFB_Nachhaltigkeitsbericht_ENG.pdf)



- Han, K. (2016). 5 Lessons in Talent Management from the German National Football Team. Retrieved from <https://blog.heavenhr.com/2016/06/14/5-lessons-in-talent-management-from-the-german-national-football-team/>
- Hesse, U. (2016). How Germany's awful Euro 2000 forced a mass restructure – and why it wouldn't work for England. *FourFourTwo*, July 7. Retrieved from <https://www.fourfourtwo.com/features/how-germanys-awful-euro-2000-forced-a-mass-restructure-and-why-it-wouldnt-work-england>
- Honigstein, R. (2015). How German football rose from the ashes of 1998 to become the best in the world. Retrieved from <https://www.theguardian.com/football/2015/sep/05/germany-football-team-youth-development-to-world-cup-win-2014>
- IFX (International Futbol X-Change). (2018). IFX German Football Academy - Football & High School in Germany. Retrieved from <http://www.ifxsoccer.com/football-academy-school-academics/>
- James, S. (2013). How Germany went from bust to boom on the talent production line Retrieved from <https://www.theguardian.com/football/2013/may/23/germany-bust-boom-talent>
- Kelly, A. L. (2023). *Talent Identification and Development in Youth Soccer: A Guide for Researchers and Practitioners*: Taylor & Francis.
- Kim, J. (2008). *An Analysis of Talent Development in Korean and German Football*. (Master's Thesis), Seoul National University. Retrieved from <https://www.semanticscholar.org/paper/An-Analysis-of-Talent-Development-in-Korean-and-Kim/5fff3eeafe4f5a4465bc1fbb0714ff7367392d55>
- KNVB (The Royal Netherlands Football Association, K. N. V. (2020). *The New Structure of Youth Football, Fun and Development First*. Retrieved from [https://knvb.h5mag.com/dutch\\_youth\\_football/technical\\_skills](https://knvb.h5mag.com/dutch_youth_football/technical_skills)
- Kulish, N. (2012). As Europe Struggles, Germany Invests Heavily in Soccer - The New. Retrieved from <https://www.nytimes.com/2012/12/26/sports/soccer/as-europe-struggles-germany-invests-heavily-in-soccer.html>
- Lara-Bercial, S., North, J., Hämmäläinen, K., Oltmanns, K., Minkhorst, J., & Petrovic, L. (2017). *The European Sport Coaching Framework: Human Kinetics*, Champaign, Illinois, United States.
- Lu, M. (2017). *Analysis of the Main Causes of the Successful Development of German Football and Its Enlightenment to China*. Paper presented at the 4th International Conference on Education, Management, Arts, Economics and Social Science (ICEMAESS 2017).
- Ma, C.-W., & Ma, Y.-G. (2018). *Shannon Information Entropy in Heavy-ion Collisions* (Vol. 99).
- Malone, E. (2014). Inside German Football: Vorsprung durch technique - Germany's formula for success. Retrieved from <https://www.irishtimes.com/sport/soccer/international/inside-german-football-vorsprung-durch-technique-germany-s-formula-for-success-1.1958435>
- Memari, Z., Hamidi, M., & Asghari Jafarabadi, M. (2013). Exploratory Study of Iranian Elite Sport Coach Evaluation Criteria. *Sport Management Studies*, 5(20), 97-126.
- Memari, Z., Hamidi, M., & Seyfi, T. (2013). Program Study, Evaluation and Development of Sports Coaches in Selected Countries and Suggestions. *Applied Research in Sport Management*, 2(1), 99-112.
- Mendonça, Í. d. O. (2014). Bundesliga Report - 10 years of academies - Talent pools of top-level. Retrieved from <https://www.slideshare.net/italomen/dfi-leistungszentren2011-gb>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. (2009). Moher D, Liberati A, Tetzlaff J, Altman DG, Group P Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Med* 6: e1000097. *Open medicine : a peer-reviewed, independent, open-access journal*, 6(7), e123-130. doi:10.1016/j.jclinepi.2009.06.005
- Naglo, K. (2020). The social world of elite youth football in Germany – crisis, reinvention, optimization strategies, and the role of schools. *Sport in Society*, 23(2), 1-15. doi:10.1080/17430437.2020.1769958
- Norman, A., Barnhofer, N., Brause, S., Brideband, J., Dohren, T., Eiermann, S., . . . Voigt, H.-U. (2015). *DFB A-Z UK lowRes.pdf*. Retrieved from [https://www.dfb.de/fileadmin/dfbdam/61175-DFB\\_A-Z\\_UK\\_lowRes.pdf](https://www.dfb.de/fileadmin/dfbdam/61175-DFB_A-Z_UK_lowRes.pdf)
- Orengo, S. (2017). Sport Council adopts conclusions on the role of coaches in society. Retrieved from <http://www.sportmyway.eu/2017/11/22/sport-council-adopts-conclusions-role-coaches-society/>
- PFA (Professional Footballers' Association). (n.d.). Coaching Qualifications - The PFA. Retrieved from <https://www.thepfa.com/coaching/courses/qualifications>
- Poel, H.-D. T., & Hyballa, P. (2011). *Dutch Soccer Secrets: Playing and Coaching Philosophy - Coaching - Tactics - Technique*: Meyer & Meyer Sport.
- Premier League. (2012). Youth: Coaching. Retrieved from <http://www.premierleague.com/news/58933>
- Premier League. (2019). Premier League Elite Player Performance Plan - EPPP. Retrieved from <https://www.premierleague.com/youth/EPPP>



- Price, L. (2015). *The Bundesliga Blueprint: How Germany Became the Home of Football*. 6 Woodside, Churnet View Road, Oakamoor, Staffordshire, ST10 3AE: Bennion Kearny, Limited.
- Reinboth, M., & Duda, J. L. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal perspective. *Psychology of Sport and Exercise*, 7(3), 269-286. doi:10.1016/j.psychsport.2005.06.002
- Roberts, A. H., Greenwood, D. A., Stanley, M., Humberstone, C., Iredale, F., & Raynor, A. (2019). Coach knowledge in talent identification: A systematic review and meta-synthesis. *Journal of Science and Medicine in Sport*, 22(10), 1-37. doi: 10.1016/j.jsams.2019.05.008
- Roe, C., & Parker, A. (2016). Sport, Chaplaincy and Holistic Support: The Elite Player Performance Plan (EPPP) in English Professional Football. *Practical Theology*, 9(3), 169-182. doi:10.1080/1756073X.2016.1221638
- Rose, F. (2016). Market Insight: The Bundesliga - Europe's gold mine for the continent's best young talent. Retrieved from <https://www.soccerex.com/insight/articles/2016/the-bundesliga-europe-s-gold-mine-for-the-continent-s-best-young-talent>
- Sæther, S. (2014). Talent identification in Soccer. What do Coaches Look for? [www.idrottsforum.org](http://www.idrottsforum.org).
- Sandelowski, M. (1998). The call to experts in qualitative research. *Res Nurs Health*, 21(5), 467-471. doi:10.1002/(sici)1098-240x(199810)21:5<467::aid-nur9>3.0.co;2-l
- Sandelowski, M., & Barroso, J. (2007). *Handbook for Synthesizing Qualitative Research*: Springer Publishing Company.
- Sarmiento, H., Anguera, M. T., Pereira, A., & Araújo, D. (2018). Talent Identification and Development in Male Football: A Systematic Review. *Sports Medicine*, 48(4), 907-931. doi:10.1007/s40279-017-0851-7
- Schmidt, S., & Stegmann, T. (2016). *Creating World Champions: How German Soccer Went from Shambles to Champions*: Meyer & Meyer Sport.
- Schreiner, R., Daniel, J. o., Junginger, C., Hauser, T., & Hoener, O. (2017). *Soccer coaches' education within the German tid program: perceptions of the quality and need for development*. Paper presented at the World Conference on Science and Soccer - Rennes, France France, 31 May-2 June.
- Simon. (2015, March 26). DFB - Youth Development | Football | German football youth development | German grassroots football. Retrieved from <http://arsenal-esque.blogspot.com/2015/03/dfb-youth-development-football-germany.html?m=1>
- Skrubbeltrang, L. S., Olesen, J. S., & Nielsen, J. C. (2021). The coach as gatekeeper, distributor of resources and partner for sports talents. *Sports Coaching Review*, 1-19. doi:10.1080/21640629.2021.1978730
- Sotiriadou, P., & De Bosscher, V. (2013). *Managing High Performance Sport*: Taylor & Francis.
- Stöber, B. (2017). *The road to success Bernd Stöber*. Retrieved from <http://www.aefca.eu/contenu/uploads/2017/11/The-road-to-success-Bernd-Stöber.pdf>
- Trevelyan, L. (2020). Football Coaching Qualifications - Levels needed to work within the UK. Retrieved from <https://www.inbrief.co.uk/football-law/coaching-qualifications/>
- Vajapeyam, S. (2014). Understanding Shannon's Entropy metric for Information. 1-7.
- Van Hoecke, J., Schoukens, H., Simm, S., & De Bosscher, V. (2009). *Measuring the performance of professional youth academies: The case of the Bundesliga*. Paper presented at the 17th Conference of the European Association for Sport Management: book of proceedings, Amsterdam (The Netherlands).
- Victoria Universities. (2024). Sport Coaching: Talent Identification & Development. Retrieved from <https://www.vu.edu.au/units/sport-coaching-talent-identification-and-development-ssc3002>
- Votteler, A., & Höner, O. (2017). Cross-sectional and longitudinal analyses of the relative age effect in German youth football. *German Journal of Exercise and Sport Research*, 1-11. doi:10.1007/s12662-017-0457-0
- Weiss, S. (2013, July 18). German Youth Development. Retrieved from <http://goonersphere.com/team-lineup/simon-says/58-german-youth-development>
- Whitney, C. (2013). Gotze & Reus Are Just the Start: How German Football Produces Talent Without End. Retrieved from <https://bleacherreport.com/articles/1589510-gotze-reus-are-just-the-start-how-german-football-produces-talent-without-end>
- Whyte, E. (2019). Characteristics of an effective coach. Retrieved from <https://metrifit.com/blog/characteristics-of-an-effective-coach/>
- Williams, A., & Reilly, T. P. (2000). Talent identification and development in soccer. *Journal of sports sciences*, 18(9), 657-667. doi:10.1080/02640410050120041