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**Toward an understanding of optimal development environments within elite English soccer academies**

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### Article

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Running Head: Toward an understanding of optimal

Toward an understanding of optimal development environments within elite English  
soccer academies

Abstract

1  
2 This study examined the factors perceived by successful coaches to underpin optimal  
3 development environments within elite English soccer academies. A semi-structured  
4 interview guide was developed to interview ten expert coaches about the environments  
5 they create for players at a key stage in their development. The interviews were  
6 transcribed verbatim and inductively content analyzed. The results identified a wide-  
7 range of factors resulting in a conceptual model that explained how these factors  
8 interact to underpin an optimal environment. Subcomponents of this model included:  
9 organizational core (e.g., advocate a player-driven ideology), adaptability (e.g., embrace  
10 novel ideas & approaches), player welfare (e.g., understand players' world-view), key  
11 stakeholder relationships (e.g., build trust with parents), involvement (e.g., encourage  
12 players' ideas/feedback), and achievement oriented (e.g., establish an explicit pathway  
13 to senior level). Collectively, the findings highlight the importance of establishing  
14 strong, dynamic, organizational cultures at elite youth soccer academies. Ways that  
15 academies might be helped to establish such environments are discussed.

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17 Keywords: elite, environment, development, soccer, organizational culture

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1           Nurturing the next generation of elite soccer players continues to be a topic of  
2 considerable importance for professional clubs and governing bodies alike (e.g., UEFA,  
3 Premier League). While the development and eventual success of a gifted young player  
4 is considered to be influenced by a variety of innate, psychological, and behavioral  
5 factors (e.g., sport intelligence, resilience, commitment) (Mills, Butt, Maynard, &  
6 Harwood, 2012); few would dispute that it is also shaped by their environmental  
7 experience (Reilly, Williams, & Richardson, 2003). Indeed, the very term talent  
8 development in soccer implies that young players are provided with a suitable learning  
9 environment to achieve their potential (Williams & Reilly, 2000). To this end,  
10 successful progression is considered to be largely contingent on the environment  
11 players' find themselves in, and importantly, the way they interact with it. For example,  
12 interactions between key stakeholders (e.g., coaches, peers, parents) within youth soccer  
13 academies are predicted to play a pivotal role in a player's development (Richardson,  
14 Gilbourne, & Littlewood, 2004).

15           Although a variety of more far-reaching, systemic environmental factors (e.g.,  
16 culture of the game) are considered to impact upon player development (Mills et al.,  
17 2012); the specific environment created at a youth soccer academy would appear to be  
18 one of the most directly controllable factors in the life of a young player. Indeed, as  
19 Durand-Bush and Salmela (2001) note, "we cannot change our genetic make-up, but we  
20 can change our environment to make it as conducive as possible to improving  
21 performance" (p. 285). Despite this assertion, the development environments in which  
22 elite young players are nurtured have not been studied in depth.

23           An inspection of the sport psychology literature reveals that this lack of research  
24 appears to hold true for sport in general. Certainly, while talent development research  
25 has accrued a comprehensive understanding of the characteristics athletes require to

1 develop and maintain elite level performance, considerably less is known about the  
2 actual environments that largely engender these characteristics and ultimately drive the  
3 talent development process (Martindale, Collins, & Abraham, 2007). Although under-  
4 represented at present, preliminary studies that have explicitly focused on effective  
5 talent development environments are beginning to emerge. For example, Martindale et  
6 al. (2007) examined coaches' perceptions of the goals and systems required to  
7 implement effective talent development environments across a wide range of sports  
8 within the United Kingdom (UK). The results revealed a variety of methods such as the  
9 use of role models, setting clear expectations, individualized programs, informal  
10 athlete/coach interactions, and promoting self-responsibility.

11         Henriksen, Stambulova, and Roessler (2010) introduced a holistic ecological  
12 approach for researching athletic talent development. Specifically two working models  
13 represent this approach: Athletic Talent Development Environment (ATDE),  
14 Environment Success Factors (ESF). The ATDE model consists of micro and macro-  
15 levels, athletic and non-athletic domains, and of a time-frame. In contrast, the ESF  
16 model includes a variety of preconditions (e.g., material, financial), the process (e.g.,  
17 practices, competitions), the organizational culture (e.g., espoused values, basic  
18 assumptions), and individual/team development and achievements. For Henriksen and  
19 colleagues, it is the interaction of the success factors that are considered to influence the  
20 development environments' effectiveness in nurturing athletes to the elite senior level.  
21 In developing this ecological approach, Henriksen et al. have investigated the talent  
22 development environments of a range of Scandinavian sports teams (i.e., sailing, track  
23 & field, kayaking). This line of research highlighted that development environments are  
24 highly individualized and context-specific in nature, and thus, demonstrate the need for

1 research to continue to determine the features that underpin successful development  
2 environments across sports and cultures.

3         A perusal of the extant coaching psychology literature may also offer some  
4 insight into the factors required to establish the optimal conditions for development.  
5 Although not explicitly concerned with elite youth development environments, Vallée  
6 and Bloom's (2005) study of how collegiate coaches built successful sports programs  
7 revealed that success was underpinned by coaches who demonstrated a personal desire  
8 to foster players' individual growth. Coaches also possessed wide-ranging  
9 organizational skills and, importantly, were able to get athletes to buy-in to the team's  
10 vision and philosophy.

11         Although this research has enhanced our understanding in the area, knowledge  
12 of athletic development environments is far from complete, particularly where elite  
13 youth soccer is concerned. Indeed, given the important role the environment is  
14 considered to play in the development of players, it is somewhat surprising that studies,  
15 to-date, have largely overlooked how player development environments are optimized.  
16 Notwithstanding a wealth of research that emphasizes the importance of deliberate  
17 practice, sport-specific play, and coaching behaviors (e.g., Álvarez, Balaguer, Castillo,  
18 & Duda, 2009; Cushion, Ford, & Williams, 2012; Ford, Ward, Hodges, & Williams,  
19 2009) within the specific training environment; far less is known about the broader  
20 context of a player's development environment. In light of the growing recognition that  
21 sport psychology should look to broaden its horizons to consider the wider  
22 organizational milieu that athletes find themselves in (Fletcher & Wagstaff, 2009), the  
23 absence of such enquiries warrants attention.

24         Further, while research within elite youth soccer has predominantly focused on  
25 the player's perspective (e.g., Sagar, Busch, & Jowett, 2010); studies with coaching

1 populations are somewhat less prolific. Given the pivotal role a coach has in the player  
2 development process, there is a clear need for more in-depth investigations that harness  
3 their experiential knowledge. Indeed, in light of the findings from Vallée and Bloom  
4 (2005), it is predicted that coaches responsible for overseeing the daily operation of a  
5 soccer academy would need to deploy a range of organizational skills that extend far  
6 beyond the specific coaching and/or practice environment. As such, a detailed attention  
7 to the strategies and mechanisms head coaches deploy in this regard might reveal  
8 important information about how academy environments are optimized from a broader  
9 organizational perspective.

10         Moreover, as advocated by Williams and Reilly (2000), a key area for further  
11 research in elite youth soccer is to provide guidelines for nurturing players through each  
12 stage of development. Indeed, talent development research (e.g., Côté & Hay, 2002;  
13 Wylleman, Alfermann, & Lavallee, 2004) suggests that athletes' progress through a  
14 series of stages and key transitions (e.g., sampling, specialization, investment,  
15 maintenance) during their development. One of the key stages in elite player  
16 development in England relates to the investment years (i.e., 16-18) where the most  
17 promising young players are signed to undertake a two year full-time youth training  
18 program known as an academy scholarship. In elite soccer's development pathway, this  
19 structured program provides young players with a finite window of opportunity to  
20 realize their ambition of becoming a professional. In talent development terms, this  
21 stage represents the specific transition from elite junior to elite senior and is where  
22 training, competition, and the pursuit of elite level performance become the major foci  
23 of a developing players life.

24         Although this specific transition is considered critical; with athletes having  
25 frequently described it as the most difficult stage they encountered (Stambulova,

1 Alfermann, Statler, & Côté, 2009), little is known about the environments that are  
2 created to support players at this crucial stage. Given the suggestion that athletes' needs  
3 vary at different stages in development and, as such, often require different coaching  
4 environments as they progress (Van Rossum, 2001); the scarcity of stage-specific  
5 investigations represents a gap in the knowledge base. As such, it would seem important  
6 that research begins to identify the factors that underpin optimal environments at key  
7 stages along the development pathway. Furthermore, as previous research (e.g.,  
8 Henriksen et al., 2010; Williams & Reilly, 2000; Richardson et al., 2004) alludes to the  
9 interactional nature of development environments, it would also seem important for  
10 studies to determine how these stage-specific factors interrelate to create the most-  
11 favorable conditions for developing players.

12 To bridge these gaps in our understanding, the purpose of the present study was  
13 to examine successful elite academy coaches perceptions of the factors considered to  
14 underpin optimal development environments for players at a key stage in their  
15 progression to the elite senior level. Rather than simply generating a descriptive account,  
16 a unique aspect of this study involves working toward an understanding of how these  
17 factors act together. From a real-world perspective, the nature of this investigation  
18 would seem timely. Indeed, the ever-increasing quality of the Premier League coupled  
19 with the extraordinary buying power of elite clubs has led to a scenario where, to  
20 succeed, young players not only have to be one of the best players in England but also  
21 the world. As such, the director of youth at the Premier League remarked that, "the  
22 focus on youth has probably never been as intense or as urgent since the inception of the  
23 Premier League as it is right now" (BSkyB, 2011). To this end, a scientific investigation  
24 of the features considered to underpin optimal player development environments might



1 have a number of important practical implications for those working within these  
2 settings.

### 3 Method

#### 4 *Participants*

5 Ten expert academy coaches aged between 31 and 62 years ( $m = 47.5, \pm s = 10.5$   
6 years) participated in the study. The coaches were recruited from professional Premier  
7 League and Championship clubs in England. Geographically, the clubs were based in  
8 the North (n=4), North West (n=2), Midlands (n=2), and South regions (n=2) of  
9 England. To capture an authentic picture of best practice, it was also essential to recruit  
10 a representative sample that could justifiably be considered expert. To this end, the  
11 inclusion of the coaches was based on a number of criteria. Firstly, it was a prerequisite  
12 that the participants were all full-time head coaches (i.e., academy managers) of elite  
13 youth academies and had at least five years' experience at the elite level. In total, the  
14 coaches had between six and 22 years coaching experience ( $m = 14.5, \pm s = 6.2$  years) and  
15 held either the Union of European Football Associations (UEFA) Pro and/or UEFA A  
16 coaching licenses. To further certify their expert status, the coaches were also selected  
17 on the basis that they were: (a) specifically responsible for overseeing the development  
18 of players at the investment year's stage (i.e., 16-18 years); and (b) managed academies  
19 that had successfully facilitated the development of players who had progressed to play  
20 at the highest professional levels in England (e.g., Premier League). In addition to the  
21 stipulated inclusion criteria, nine of the coaches held the English Football Association's  
22 (FA) Academy Manager's license. Three of the participants also held the League  
23 Manager's Association (LMA) Certificate in Applied Management for Football.

#### 24 *Procedure*

1           Following institutional ethics approval, suitable candidates for participation were  
2 identified via assistance from English soccer's governing bodies (i.e., FA, Football  
3 League). The coaches were initially contacted by email detailing the purpose and nature  
4 of the study and to establish whether they met the inclusion criteria. Of the 20 coaches  
5 contacted who met the criteria, 10 agreed to participate in the study representing a 25  
6 percent sample of the elite academies that currently function in English soccer. This  
7 number of participants is consistent with previous research involving an interpretative  
8 approach to analysis (e.g., Dale, 2000). To obtain an in-depth understanding of the  
9 coaches' perceptions, interviews were adopted as the method of data collection. Initially,  
10 a provisional interview guide was pilot tested with three youth soccer coaches not  
11 otherwise connected to the study. This process enabled the researcher to make minor  
12 alterations to the narrative of the guide. Convenient times for the interviews were agreed  
13 and informed consent was obtained before data collection began. The coaches were also  
14 assured that their views would remain anonymous and be treated confidentially. The  
15 interviews were carried out at each academy's training facilities.

#### 16 *Interview guide*

17           A semi-structured interview guide based on existing talent development literature  
18 (i.e., Martindale et al., 2007; Vallée & Bloom, 2005) was carefully structured to elicit  
19 truly open-ended responses. Though the same set of questions were asked with each  
20 participant, the interviewer let the natural flow of conversation direct the discussion  
21 which allowed coaches' specialist knowledge and experiences to be explored in greater  
22 depth as it arose (Patton, 2002). The interviews commenced with a rapport building  
23 introductory question to initiate discussion and preface the topic (e.g., can you tell me a  
24 little about your coaching background and experience in soccer?). The main body of the  
25 guide contained questions about how these expert coaches created successful

1 environments (e.g., how do you look to create an effective player development  
2 environment?) and also the factors considered to underpin optimal player development  
3 environments (e.g., what strategies and methods do you believe help to create an  
4 optimal environment at the academy?). Elaboration probes were used throughout to  
5 elicit in-depth information and to ensure that coaches had discussed everything they felt  
6 relevant before the interviewer moved on to the next question. Each interview was  
7 digitally recorded in its entirety and ranged from 55 to 120 minutes in length ( $m$  84.6,  $\pm$   
8  $s$  = 20.6 mins).

### 9 *Data analysis*

10 Thematic interpretational content analysis was adopted for analyzing the data (cf.,  
11 Côté, Salmela, Baria, & Russell, 1993). This analysis was selected to specifically  
12 display the thematic content of the interview scripts (i.e., highlighting the central themes  
13 characterising coaches' views) while engaging in the interpretations and meanings of the  
14 participants' quotes, and thus, analyse the data beyond description alone that is often  
15 associated with conventional qualitative content analysis. Specifically, this involved  
16 examining the verbatim transcripts and identifying any meaningful units of information  
17 (i.e., quotes that represented a single, recognizable aspect of participants' views in  
18 relation to factors perceived to underpin optimal environments). Individual meaning  
19 units (i.e., raw-data themes) that related to a common topic were coalesced into groups  
20 of greater generality, resulting in the emergence of lower- and higher-order themes. For  
21 example, raw-data responses such as promote togetherness/camaraderie amongst  
22 players, demonstrate equality amongst players, and develop local home grown players,  
23 were grouped to create the lower-order theme of team-ethos. It is important at this stage  
24 of the analysis process, for interpretation and meaning, that similarities and differences  
25 are discussed (Côté et al., 1993). Therefore, the research team considered the

1 interpretation of one transcript and then viewed the transcript in relation to the whole  
2 data (i.e., themes emerging). The final level of classification consisted of grouping  
3 higher-order themes into key domains. This stage followed a similar process to the prior  
4 stages of creating themes, except it was conducted at a more abstract, general  
5 dimensional level of analysis. This process resulted in the creation of a conceptual  
6 model that explains the interrelationship between the key factors at a macro level.

### 7 *Trustworthiness*

8         A number of measures were followed to ensure the credibility of the data. Firstly,  
9 the primary investigator (PI) who conducted the interviews had extensive training in  
10 qualitative research methods and had previous experience of interview-based research.  
11 Secondly, the researcher was familiar with English soccer culture, including jargon, and  
12 specific club history. The researcher also had an extensive knowledge of teams, coaches,  
13 and players in English soccer. This familiarity and understanding helped to build  
14 rapport with the coaches, which in turn, facilitated the interviews.

15         Other procedures used to ensure credibility included regular peer debriefing with  
16 the PI's research team. This involved examining the methods, data analysis and  
17 decision-making processes at each stage of the investigation. In addition, two  
18 experienced qualitative researchers independent of the research team helped triangulate  
19 the findings by assessing the data at each stage of analysis. This process of triangulation  
20 is often referred to as analysis triangulation (Patton, 2002). Specifically, an arbitrary  
21 selection of raw-data themes were presented to the independent researchers for them to  
22 categorize into the lower-and higher-order themes. The consistency amongst these  
23 researchers was found to be 93% for the lower-order themes and 91% for the higher-  
24 order categories. The researchers met to discuss differences and reach agreement on the  
25 final themes. As one example to illustrate the process of how consensus was achieved,

1 the raw data theme of establish a highly structured program was categorized into the  
2 lower-order theme of vision by one researcher and the theme of discipline by a second  
3 researcher. The researchers re-read the participant's transcript to discuss the meaning  
4 and reasoning guiding the thematic analysis. Based on the meaning it was agreed that  
5 establishing a highly structured program was explaining the role of setting rules and  
6 maintaining a structured approach for a disciplined player environment, and thus, was  
7 categorized in the lower-order theme of discipline. Finally, to further establish  
8 credibility of the results, participant member checks (Lincoln & Guba, 2000) were  
9 conducted whereby a summary of the interview and a diagram of the model were sent to  
10 each coach so they could substantiate the accuracy of the data. Responses provided from  
11 the coaches confirmed the accuracy of the data and appropriateness of the model, thus,  
12 assuring the research team that the results were valid and reliable.

### 13 Results

14 A total of 80 raw-data themes emerged from the interview transcripts representing  
15 the strategies and mechanisms considered by expert coaches to underpin optimal player  
16 development environments. The raw-data themes were coalesced into 17 lower-order  
17 and nine higher-order themes (see Figure 1). These higher-order themes were titled:  
18 Organizational core; adaptability, player welfare, stability, effective communication,  
19 key stakeholder relationships, involvement, achievement oriented, and material  
20 provisions. To go beyond the descriptive and provide a more meaningful understanding  
21 of how these themes interact to support an optimal environment, higher-level  
22 conceptualization of the data revealed four key domains. These were titled: Operating  
23 system, psychosocial architecture, organizational functioning, and physical environment.  
24 A breakdown of the subcomponents (i.e., higher-order themes) within each domain as  
25 well as the interrelationship between these domains can be seen in Figure 2. As

1 displayed in this conceptual framework, optimal player development environments  
2 appear to be driven by the interaction of: (i) a coherent operating system (i.e., the  
3 strategy); (ii) a strong psychosocial architecture (i.e., the process); (iii) consistent  
4 organizational functioning (i.e., the process); and (iv) a suitable physical environment  
5 (i.e., the tangible). These key domains and interrelated subcomponents are discussed in  
6 detail below.

7 *Operating system.* A coherent operating system is the strategic center of an  
8 optimal development environment. This represents an academies fundamental approach  
9 for player development (i.e., ethos, vision, values). In essence, it is the heart and soul of  
10 the academy. Specifically, operating system (i.e., strategic) emerged from the higher-  
11 order theme of organizational core which relates to the mechanisms that collectively  
12 provided the strategic foundation for an optimal environment. Within organizational  
13 core, eight raw-data themes were categorized into three lower-order themes:  
14 Development ethos (e.g., establish clear core values to underpin development), identity  
15 (e.g., craft individuality for academy), and vision (e.g., create a clear mission/purpose).  
16 Highlighting how these mechanisms (e.g., ethos, vision) work together to support the  
17 overall strategy, one of the coaches discussed:

18 I believe our mission is to develop elite young players...and elite people. The  
19 philosophy we have here is the means to achieving that. It's a philosophy  
20 [points to Latin on club emblem] that we wear with pride and has been at the  
21 heart of the club for over 120 years.

22 Within the lower-order theme of development ethos, the coaches discussed the  
23 importance of espousing whole-person development. As one coach explained, "The *one*  
24 thing that we pride ourselves on is producing the person as well as the player. The  
25 holistic development of the player is vital so we look to educate them socially as well as

1 football [soccer] wise.” The need to establish explicit core values was also considered  
2 vital as they provided the framework to guide development. One of the coaches  
3 commented:

4 I really go back to old fashioned core values. Core values in terms of integrity,  
5 how hard you work, respect for the game, respect for your colleagues, and respect  
6 for your staff. Before we get on the training pitches it’s those values that are  
7 looked at.

8 *Psychosocial architecture.* With the organizational core’s development ethos  
9 acting as the catalyst, this key domain comprises the processes that ultimately foster a  
10 supportive, engaged, and positive climate. Thus, it represents the psychological and  
11 social environment that is constructed within the academy. This psychosocial  
12 architecture is largely built through the interpersonal relationships that exist amongst all  
13 key stakeholders involved in the development process. Specifically, the higher-order  
14 themes of player welfare, involvement, key stakeholder relationships, and achievement  
15 oriented encompass this domain.

16 The theme of player welfare relates to the processes and mechanisms used to  
17 safeguard the well-being of players. This was considered fundamentally central to the  
18 creation of an optimal environment. Highlighting its link to key stakeholder  
19 relationships, one of the coaches remarked, “I think care is the key...our care for players  
20 is probably second-to-none. I made sure I knew *all* our kids *and* their parents right the  
21 way through to 18.” A further coach stated, “It’s probably no different to your own  
22 family. When you go home, you want to feel safe, you want to feel warm, and you want  
23 to feel welcome...so we try to create all those elements.” The importance of  
24 understanding the player’s world-view, and being there for players if required was also  
25 stressed. As one coach explained:

1 We have a very hands-on approach and like players to know we're there for  
2 them. If they want to bounce things off us or if they have personal problems,  
3 they can come and talk to us. I'm very open with them. I understand what  
4 they go through at this age so I like to think we're pretty good at developing  
5 them not only as players but also as people.

6 The higher-order theme of involvement relates to the processes deployed to  
7 empower key stakeholders and create a climate of ownership and relatedness. In total,  
8 11 raw-data themes were categorized into two lower-order themes: Empowerment (e.g.,  
9 make player feel important/part of the club), and team-ethos (e.g., share success/make  
10 players feel part of the group). Within the lower-order theme of empowerment, the  
11 importance of including support staff in decisions about the program was discussed.  
12 This was considered to foster an environment where staff sense they can make valued,  
13 unique contributions. As the following coach explained:

14 I would never make a one-off decision and say, "Right, that's the way we're  
15 going to go now." I would pull the staff together and say, "Look, I think we  
16 can improve if we do this, this, and this....What do you think?" That was  
17 important as everybody then buys into the decision.

18 Linked to player welfare, the need to make the player feel important/part of the  
19 club was discussed as a method to cultivate an environment where players feel  
20 valued. One of the coaches commented:

21 We always put the players first. In any working environment, if people are not  
22 comfortable in it, they won't develop so when a boy signs for [club name] he gets  
23 told that he's more important than me or any member of staff because ultimately  
24 we are here for him.



1 At this key stage, the need to create a player-driven environment that promotes  
2 self-responsibility was also considered crucial. The following coach explained how they  
3 encouraged players to be more accountable for their own development:

4 One of the big things that we implement is not allowing the lads to have any  
5 excuses. If they want something, we do our best to provide it. We're not  
6 mothering them or spoiling them but we create an environment whereby  
7 ultimately, they've got to take responsibility for themselves. If they haven't  
8 had a good game or if they're not progressing at the rate they'd like, they've  
9 got to take some responsibility for that.

10 Within the lower-order theme of team ethos, the coaches discussed the value of  
11 developing local home-grown players. This was encapsulated by the following coach:

12 If you look at most clubs that have been successful in Europe, they've had a  
13 basis of home-grown talent...Barcelona's a good example. I think that's a  
14 great thing because it gives you a natural camaraderie. It also gives the  
15 players an ownership of the club which is what we all believe in.

16 Underpinned by the development ethos and core values, the higher-order theme of key  
17 stakeholder relationships relates to the processes and mechanisms used to develop  
18 positive working relationships with all key stakeholders both internally (i.e., players,  
19 staff) and externally (i.e., parents). As one coach explained, "we work hard to create a  
20 positive development environment between the family and ourselves. It's how you treat  
21 people. Personal liaisons are one of the real factors of why we are so successful at the  
22 academy." Specifically, 14 raw-data themes were categorized into two lower-order  
23 themes: Internal stakeholders (e.g., build reciprocal understanding with senior team  
24 manager), and external stakeholders (e.g., convey total commitment to parents). Within  
25 the lower-order theme of internal stakeholders, treating players with respect, being

1 open, honest and approachable with players, and promoting transparent processes were  
2 considered vital. The following coach encapsulated these themes,

3 The big difference here is the transparency, the openness and the honesty of the  
4 approach. We promote an open door policy so if someone walked into the office  
5 and said “Why am I not in the team?” They get a straight answer.

6 Within the lower-order theme of external stakeholders, the need to treat parents  
7 and families as customers was considered important. In elite youth soccer, recruitment  
8 and retention of players are integral aspects of player development. As such, adopting a  
9 service mind-set was viewed as a vital feature of an optimal environment. As one coach  
10 explained, “We always have the view that our players and their families are our  
11 customers. So, if *we* didn’t do it well, somebody *else* would.” Similarly, the need for  
12 staff to build trust with players and parents was considered essential. Emphasizing the  
13 link between organizational functioning and psychosocial architecture, the following  
14 coach commented, “We do our best to build a triangle of trust between the player, the  
15 parent, and the staff. Now it’s got to be interlinked because if it isn’t you’ve had it.”

16 The higher-order theme of achievement oriented is another important  
17 subcomponent of the psychosocial architecture. Specifically, this refers to the processes  
18 and mechanisms that were deployed to create a positive motivational climate that  
19 espoused a culture of excellence. In total, 18 raw-data themes were coalesced into four  
20 lower-order themes: Discipline (e.g., set clear parameters & ground rules), engagement  
21 (e.g., allow players to express their creativity), challenge (e.g., create demanding  
22 physical & mental training sessions), and inspiration (e.g., establish an explicit pathway  
23 to the senior level). To get the best out of young players, the coaches discussed the need  
24 to establish an environment that was disciplined without being oppressive. One coach  
25 explained, “they get quite a regimented structure which I think players need because if

1 you just let them get on with it, they generally start to do their own thing and they'll  
2 start to fall by the wayside." The need to keep players on their toes and continually  
3 engaged was also considered important. Strategies used to achieve this included  
4 providing a dynamic development program and utilising eclectic teaching methods. One  
5 coach commented, "it's not just on the training field...we teach them nutrition,  
6 flexibility work, proprioception work, injury prevention work, video analysis, and  
7 media skills. So, using different tools, we teach them in different ways." The necessity  
8 to keep the atmosphere positive at all times was also considered important as the  
9 following coach explained, "The environment should be created so it is positive, vibrant,  
10 and forward-thinking...so if there's a problem ... [claps]... it's gone...let's go again. So  
11 one thing, our environment has a short memory. I think that's important."

12 The need to inspire players was also considered vital. Within this lower-order  
13 theme, the necessity to establish an explicit pathway to the senior level was deemed  
14 particularly important. This was encapsulated by the following coach who stated,

15 What we offer against most Premiership clubs is an opportunity to progress  
16 because there's a route through here. At [club x], [club y] there's no route through.  
17 You've got World Cup winners in front of you so it ain't going to happen.

18 Similarly, establishing an environment that provided players with opportunities to  
19 experience the senior level (e.g., training with the senior team) was considered  
20 paramount for effective development. As one coach explained, "I've got loads of good  
21 players coming through but they only ever realize they're a good player if the [senior  
22 team] manager gives them a go. They've got to have it...talent has to meet  
23 opportunity."

24 *Organizational functioning.* This key domain relates to the specific processes and  
25 behaviors that underpin the smooth operation of the academy. This domain interacts

1 with the operating system by bringing the ethos, values, and vision to life, thereby,  
2 facilitating how the academy functions. Illustrating the link between strategy and  
3 process, the following coach explained, “So if you've got the philosophy and your aims  
4 and objectives in place... then you get onto the processes and how you are going to  
5 bring them about.” Specifically, organizational functioning comprised the three higher-  
6 order themes of adaptability, stability, and effective communication. The higher-order  
7 theme of adaptability relates to the strategies and mechanisms considered to create an  
8 environment that was progressive and flexible in its approach to development. Within  
9 this higher-order category, six raw-data themes were coalesced into two lower-order  
10 themes: Commitment to innovation (e.g., embrace novel ideas & approaches), and key  
11 stakeholder development (e.g., promote recurrent staff training & development).  
12 Mediated by the organizational core, within the lower-order theme of commitment to  
13 innovation the coaches discussed the need to “continually strive for new and improved  
14 methods” and “regularly review systems and practices”. Given the fast paced, ever-  
15 changing nature of professional soccer, the importance of being adaptable was  
16 considered essential as the following coach explained, “You’re always evolving as a  
17 club and always trying to develop...you must be prepared to change as the game  
18 changes all the time.” Within the lower-order theme of key stakeholder development,  
19 the importance of not solely focusing on player development at the expense of other key  
20 stakeholders (i.e., staff, parents) was underlined. With the development ethos acting as  
21 the catalyst, this all-inclusive focus also appeared to help strengthen the psychosocial  
22 architecture by engaging all stakeholders. The importance of such an integrated holistic  
23 focus was encapsulated by the following coach:

24       It’s been said that academies should be like greenhouses. They should allow  
25       young players to grow and develop like plants. I would take it a stage

1 further...so as well as young players developing, the staff and parents  
2 should also be developing and that's the only way you can stay at the front.

3 Underpinned by the operating systems core values and linked to an academy's  
4 capacity for a robust psychosocial architecture, the higher-order theme of stability  
5 relates to the processes and mechanisms that were considered to support an integrated,  
6 coordinated and stable environment. Specifically, eight raw-data themes were coalesced  
7 into two lower-order themes: Integration (e.g., well-integrated staff), and continuity  
8 (e.g., ensure continuity with coaches and support staff). Within the lower-order theme of  
9 integration, the following coach explained the need to link the academy with senior  
10 team operations, as he explained,

11 The [senior team] manager is just down the corridor so it's very much a  
12 working together environment where there is no separation. At some  
13 academies, you can have different sites for first [senior] and youth teams.  
14 However, I firmly believe that when the first team is interlinked with the  
15 academy, it's not such a big jump for the players.

16 Within the lower-order theme of continuity, the necessity to have consistency with  
17 academy personnel was considered a crucial constituent of organizational functioning. It  
18 also appeared to play a key role in bolstering the psychosocial architecture by helping to  
19 maintain and regulate key stakeholder relationships. As one coach commented,  
20 "continuity and sustainability are two vital ingredients in a youth program. It's no  
21 coincidence that the clubs with the more stable environments in terms of staff are  
22 proving to be more successful." The coaches also stressed the importance of ensuring  
23 that staff behaviors were aligned and consistent. This consistency was explained by one  
24 coach in the following way:

1            “If you don’t get it right in here [academy], you don’t get it right out there [points  
2            to playing field]. If you haven’t got the staff singing together off the same hymn  
3            sheet, you’ll never get it right on the pitch.”

4            The higher-order theme of effective communication acts as a crucial mediator between,  
5            and within, both strategy and process, thus promoting cohesiveness amongst the  
6            domains. To illustrate, effective communication not only facilitated the smooth  
7            operation of the organization from a functional perspective; it also helped bring the  
8            organizational core to life (i.e., what we are all about and how we are going to achieve it)  
9            and strengthened the psychosocial architecture by acting as a catalyst to positive key  
10           stakeholder relationships.

11           Specifically, five raw-data themes were coalesced into the following two lower-  
12           order themes: Transmit key messages (e.g., ensure expectations are clear to all  
13           stakeholders), and effective feedback (e.g., talk regularly with parents about their sons’  
14           progress). The lower-order theme of transmit key messages relates to the importance of  
15           clearly communicating the academy’s operating system (i.e., ethos, identity, vision).  
16           Relating to expectations, one such message centered on communicating the need for an  
17           integrated approach amongst key stakeholders. As the following coach explained, “the  
18           environments not only about them [players]...so we have regular meetings with staff  
19           and parents to ensure everyone knows what is expected of them. It’s a program that  
20           exists not only for the players but for everyone.” Linking to the psychosocial  
21           architecture, the lower-order theme of effective feedback relates to the need to provide  
22           constructive two-way channels of communication to both players and parents. As the  
23           following coach explained, “We have regular parent nights where we give an honest  
24           appraisal of their son’s progress and then they [parents] can fire back at us as well.”

1        *Physical environment.* The fourth key domain represents the tangible, physical  
2 aspects of the development environment (e.g., training facilities, accommodation).  
3 Specifically, the higher-order theme of material provisions comprises this domain and  
4 demonstrates the interlinking contextual role that these provisions play in enabling  
5 players the opportunity to develop optimally. In addition to first class training facilities,  
6 the following coach explained the importance of providing high-quality accommodation  
7 for players at this key stage,

8        Some of the lads are living away from home for the first time in their lives at 16  
9 years of age. That's a *massive* thing. So where they're staying is so important. If  
10 they're unhappy at the digs [accommodation] you've got no chance.

#### 11                                  Discussion

12        Drawing upon the experiential knowledge of successful expert coaches, the  
13 present investigation represents a preliminary attempt to reveal the factors that underpin  
14 optimal development environments for elite academy soccer players at a decisive stage  
15 in their progression to the senior level. The findings support several assumptions  
16 derived from the recent research on talent development and coaching psychology. First,  
17 many of the factors that emerged in the present investigation offer support for the  
18 systems and goals identified by Martindale et al. (2007). For example, the use of role  
19 models, setting clear expectations, encouraging informal coach-athlete exchanges,  
20 establishing open and honest two-way communication, and promoting self-  
21 responsibility were all strategies conveyed by the expert coaches in the present study.

22        Second, congruent with the findings of Henriksen et al. (2010) and Vallée and  
23 Bloom (2005), the need to base the environment on a robust organizational core (e.g.,  
24 espoused values, beliefs, goals) including a clear philosophy and a coherent vision of  
25 what the academy wanted to achieve was evident in the present study. Further, the

1 importance of espousing holistic development supports previous studies (e.g.,  
2 Martindale et al., 2007; Vallée & Bloom, 2005). Specifically, the coaches in the current  
3 investigation stated that their academy ethos was strongly grounded in developing well-  
4 rounded individuals. The results of the present study also offer support for research (e.g.,  
5 Vallée & Bloom, 2005) that has highlighted the need for head coaches to possess a  
6 wide-range of organizational and management skills. Particularly noteworthy were the  
7 parallels that could be drawn with previous research regarding the need to empower  
8 individuals and obtain buy-in from key stakeholders.

9         In accordance with existing youth soccer literature (e.g., Richardson, et al., 2004;  
10 Williams & Reilly, 2000), the findings also underline the pivotal role that interactions  
11 between key stakeholders play in a player's development, and emphasize the  
12 importance of establishing supportive socio-emotional environments. Further, a number  
13 of themes generated in the present study (e.g., challenge, engagement) support previous  
14 research (e.g., Álvarez et al., 2009; Cushion et al., 2012) by demonstrating how coaches  
15 can manipulate the training environment to make it as conducive as possible to  
16 development. Along these lines, the findings also highlight how coaches might engineer  
17 the environment to develop psychological factors such as mental toughness. It was  
18 apparent that some of themes in this study echoed techniques identified in previous  
19 research (e.g., Weinberg, Butt, & Culp, 2011) to be associated with the development of  
20 mental toughness in athletes. Specifically, the themes of engagement, challenge, and  
21 empowerment support the notion that mental toughness is developed by exposing  
22 athletes to tough, challenging experiences but within the framework of a positive and  
23 confidence building environment. Offering support for such environmental  
24 manipulation, in their study of mental toughness in soccer players, Thelwell, Weston,  
25 and Greenlees, (2005), found that tough environmental challenges (e.g., being dropped



1 from team) encountered in the formative stages of development were perceived by  
2 senior professionals to facilitate their progress to the professional level. In this regard,  
3 determining, more precisely, the ways coaches can orchestrate situations conducive for  
4 developing mental toughness in elite young players would appear to represent an area  
5 for further development.

6         Despite this agreement with previous research, the present study offers a number  
7 of unique insights that add to our understanding of talent development environments,  
8 particularly where elite youth soccer is concerned. Indeed, no research has explicitly  
9 examined and conceptualized the factors perceived by academy coaches to underpin  
10 optimal development environments for players at a key stage in their journey to the  
11 senior level. The current investigation has bridged this gap and, in doing so, has resulted  
12 in a conceptual framework (see Figure 2) that elucidates the dynamic interrelationships  
13 between the reported higher-order themes at a macro level. As explained in the results  
14 section, optimal player development environments appear to be driven by the interaction  
15 of four key domains: (i) a coherent operating system (strategic); (ii) a strong  
16 psychosocial architecture (process); (iii) consistent organizational functioning (process);  
17 and (iv) a suitable physical environment (tangible). To discuss further how these key  
18 domains act together to produce the most-favorable development conditions, one could  
19 use the analogy of a computer system. Specifically, the operating system could be  
20 considered analogous to the hardware of a computer system; whereas the psychosocial  
21 architecture, organizational functioning, and physical environment domains represent  
22 the software. To illustrate how all four domains work in collaboration, an academy  
23 might possess a coherent organizational core, exhibit consistent organizational  
24 functioning, and have a suitable physical environment. However, without a strong

1 psychosocial architecture, the academy might not live its values and strategy would fail  
2 to be executed by process.

3         When viewing the framework as a whole, the four key domains and the  
4 subcomponents therein point toward the importance of a strong, dynamic organizational  
5 culture as a keystone for the creation of an optimal development environment.  
6 Cruickshank and Collins (2012, p.340) define culture as, “a dynamic process  
7 characterised by the shared values, beliefs, expectations and practices across the  
8 members and generations of a defined group.” Put simply, organizational culture can be  
9 viewed as, “the way we do things around here”, and largely guides how individuals  
10 think, act, and feel (Reid & Hubbell, 2005). In corporate settings, successful managers  
11 understand the interplay between strategy, process, and high performance. In doing so,  
12 they ensure that their culture is a powerful and enduring source of competitive  
13 advantage by being an enabler (rather than a hindrance) to strategy execution (Reid &  
14 Hubbell, 2005). However, while the creation of high performing cultures in elite sport is  
15 purported to be an increasingly important aspect of a contemporary sport psychologist’s  
16 role, to date, no clear empirical evidence exists to support its delivery (Cruickshank &  
17 Collins, 2012). As such, it is questionable whether applied sport psychologists are  
18 presently equipped to meaningfully intervene at an organizational level.

### 19 *Practical implications*

20         The findings from the present investigation offer a number of practical  
21 implications for those working within elite youth soccer settings (e.g., coaches, sport  
22 psychologists). An overarching implication of this study is that a detailed, scientific  
23 attention to expert perceptions of best-practice might help academies to optimize their  
24 environment and lay the foundation for a strong organizational culture.

1           For head coaches charged with overseeing the operation of an academy, the  
2 findings underline the importance of developing a coherent operating system on which  
3 to base player development. To bring this operating system to life within the academy  
4 environment, it also appears important for head coaches to possess, and deploy, a  
5 repertoire of organizational, management, and personal liaison skills. For example,  
6 such skills appear particularly germane for establishing a strong link to the senior team  
7 which was considered an integral feature of an optimally performing environment.  
8 Indeed, as one coach remarked, “talent must meet opportunity”, thus building a  
9 reciprocal understanding with the senior team manager appears imperative. Côté,  
10 Salmela, and Trudel et al. (1995, p.9) contend that organization involves, “applying  
11 one’s knowledge towards establishing optimal conditions for training and competition  
12 by structuring and coordinating the tasks involved in reaching the goal.” To this end, we  
13 feel the development of such knowledge would help coaches to establish a strong  
14 psychosocial architecture and facilitate consistent organizational functioning within elite  
15 academies.

16           In addition, while considerable research attests to the importance of positive  
17 coach-athlete relationships, the present study accentuates the need for an integrated  
18 approach to talent development that centers on creating a strong link between all  
19 stakeholders (i.e., player, staff, parent). One coach referred to this as the “triangle of  
20 trust”. We believe this is an important finding as in most instances; the primary focus in  
21 talent development is on the athlete. As such, in working towards creating the optimal  
22 conditions for player development, it is imperative for academies to invest time in  
23 attempting to fully harness the potential of other influential stakeholders in the  
24 development process. In this regard, while the present study has focused on the coach’s  
25 perspective, the parental viewpoint has also started to receive some attention (i.e.,

1 Harwood, Drew, & Knight, 2010) Specifically, Harwood et al. studied the perceived  
2 stressors of academy parents during their child's specialising (i.e., age 9-15) years of  
3 development. Parents identified academy processes and quality of communication (e.g.,  
4 limited information, feedback and communication from coaches) as stressors. This  
5 finding attests to the importance of academies providing good channels of  
6 communication as a mechanism to facilitate organizational functioning and help  
7 construct a strong psychosocial architecture. Indeed, while research (i.e., Mills et al.,  
8 2012) has shown that certain parental behaviours are considered by coaches to exert a  
9 negative influence of player development (e.g., parental pressure, interference,  
10 conflicting advice), it is clear that academies must be able to communicate and work  
11 with parents as part of creating an optimal environment for development.

12         The findings also hold a number of implications for sport psychologists working  
13 within these settings. For example, in this study, it was clear that academy environments  
14 should act as an incubator for both professional and personal development. Given that  
15 elite academies operate with an exacting remit from the Premier League to develop  
16 players holistically, this finding was anticipated. However, while the coaches strongly  
17 alluded to whole-person development as a fundamental tenet of an optimal environment,  
18 an academy is nonetheless clearly oriented to being successful at soccer. To this end,  
19 one wonders if the elite soccer focus of these academies encourages an athletic-identity  
20 and potential identity-foreclosure for these adolescents (Murphy, Petitpas, & Brewer,  
21 1996). If a strong athletic-identity is emphasized for players, then education can  
22 potentially be neglected and the teaching of life skills often ignored or only given scant  
23 attention (Grove, Lavalley, & Gordon, 1997). Given the suggestion that less than one  
24 per cent of players are going to make it as a professional (Green, 2009), academies must  
25 be mindful of not, albeit unintentionally, instilling such identity-foreclosure. For a truly

1 balanced approach to player development, it would seem crucial to pay close attention  
2 to preparing these adolescents for success in other life domains. Given that a key ethical  
3 canon in psychology is to do no harm, applied practitioners working in these settings  
4 have an important role to play in ensuring this balanced approach is firmly embedded  
5 into an academy's psychosocial architecture.

6 In addition, given that optimal environments were considered to be underpinned  
7 by positive coach-player relationships that encourage self-responsibility, empowerment,  
8 and togetherness; we support the recommendation to promote autonomy-supportive  
9 climates in elite youth soccer (cf., Álvarez et al., 2009) In such climates, it is suggested  
10 that players feel more competent in their sport, more autonomous in their actions, and  
11 better related to significant others from their environment. Considerable empirical data  
12 (e.g., Mageau & Vallerand, 2003) demonstrates that enhanced perceptions of autonomy,  
13 competence, and relatedness nurture intrinsic and self-determined extrinsic motivation;  
14 both of which are important determinants of persistence and performance. However, in  
15 highly pressurized, results-focused settings such as professional soccer, it is suggested  
16 that coaches might become ego-involved in their work and, in turn, emit controlling  
17 behaviors (Mageau & Vallerand, 2003). As such, sport psychologists could help shape  
18 the development environment via the promotion of autonomy-supportive coaching  
19 climates that extend beyond the specific practice environment in order to be woven into  
20 the very fabric of the academy's culture.

21 Following in the footsteps of previous researchers (e.g., Pain & Harwood, 2008),  
22 we believe the data reported here could also enable the development of an empirically  
23 driven diagnostic tool that could be used by applied practitioners to provide academies  
24 with a clear understanding of the strengths of their current development environment  
25 and, also, generate awareness about areas that might require optimization. Given the

1 importance placed on an integrated approach to player development, it is anticipated  
2 such an applied tool could be used to gauge the views of all key stakeholders (i.e.,  
3 player, staff, parent), which, in turn, would enable a triangulated quantitative assessment  
4 of the potential positive and negative impact of a wide range of factors within the  
5 environment. Following a data-driven, collaborative approach to psychological  
6 provision, the practitioner could work alongside the coach to identify areas for  
7 optimization, and develop action points and strategies for meaningful change. Work is  
8 currently underway with a view to developing this tool.

9 *Strengths and limitations*

10 A primary strength of this study is that it represents an initial attempt to reveal  
11 the factors that underpin optimal development environments at a key stage in a player's  
12 progression to the professional level. Indeed, by focusing specifically on the investment  
13 years, the findings also serve to address the scarcity of research that has targeted this  
14 important period for athletic development. In addition, by assembling the key and  
15 common factors perceived by successful coaches presently working within elite player  
16 development environments, a further strength involved overcoming some of the  
17 methodological limitations of retrospective study designs. This study has also advanced  
18 existing literature by highlighting how the relevant factors can work together to create  
19 the optimal conditions for development. This advancement was, in part, made possible  
20 by the method of data collection (i.e., interviews) and more importantly the analysis  
21 chosen. Specifically, while interviews provided in-depth, rich, and context relevant  
22 information, the unique information on how the factors involved work together was  
23 generated through adopting a thematic interpretative content analysis.

24 Although this study has enhanced our understanding of elite player development  
25 environments, some limitations need to be addressed. First, given the culturally specific

1 focus on the English academy system, the transferability of the findings to player  
2 development environments in other countries is unknown. As such, readers should be  
3 circumspect in any attempt to apply the findings to other settings. Second, only ten  
4 academy coaches were surveyed in the present study. However, it was felt that the  
5 relatively small sample size was offset by the participants' wealth of experience in elite  
6 player development (a mean of over 14 years), and that a quarter of all elite soccer  
7 academies were represented.

8         We must also acknowledge that it is not our intention to imply that every coach  
9 deployed all the strategies and mechanisms reported here; nor suggest that they were  
10 implemented in exactly the same way or to the same extent. Indeed, although this study  
11 provides insight into how coaches develop optimal player development environments,  
12 obtaining coaches' opinions of how they shape the environment only represents one side  
13 of the equation. With effectiveness largely being a process-product phenomenon, it  
14 would seem important to elicit the perceptions of players to ascertain whether or not  
15 academy environments are presently meeting their needs. A follow-up study to this end  
16 is currently underway.

17 *Concluding remarks*

18         The current study represents an initial step in connecting high performing  
19 cultures to elite player development. Indeed, the findings suggest that a strong, dynamic  
20 organizational culture provides the bedrock for an optimally performing development  
21 environment. Given the increasing quality in the Premier League and the impact this has  
22 on opportunities for young players, academies must continually search for ways to  
23 enhance player development. We believe that a focus on the creation of such cultures  
24 represents such an avenue. From an applied perspective, engineering the environmental  
25 conditions for success in elite youth soccer represents a highly enticing prospect for

1 those currently working in these contexts. While it is hoped the present study offers a  
2 building block toward the realization of such a prospect, future research must determine,  
3 more precisely, the ways that sport psychologists can make a substantiated contribution  
4 in shaping the culture within elite youth soccer academies. If this can be achieved, and  
5 effectively applied, we believe it would afford developing players with the optimal  
6 platform to transform their potential into excellence and successfully navigate the  
7 challenging transition from elite junior to elite senior.

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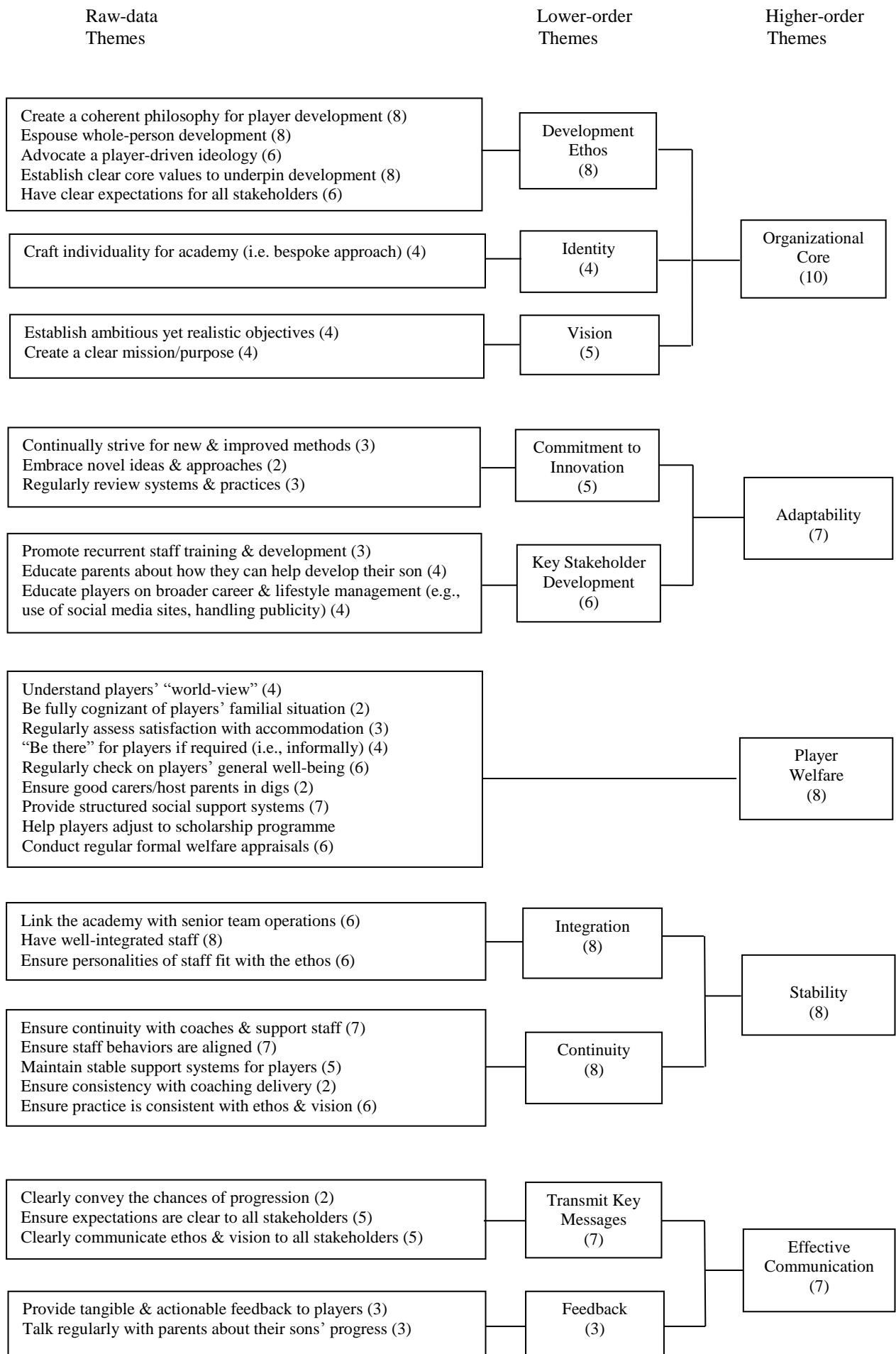


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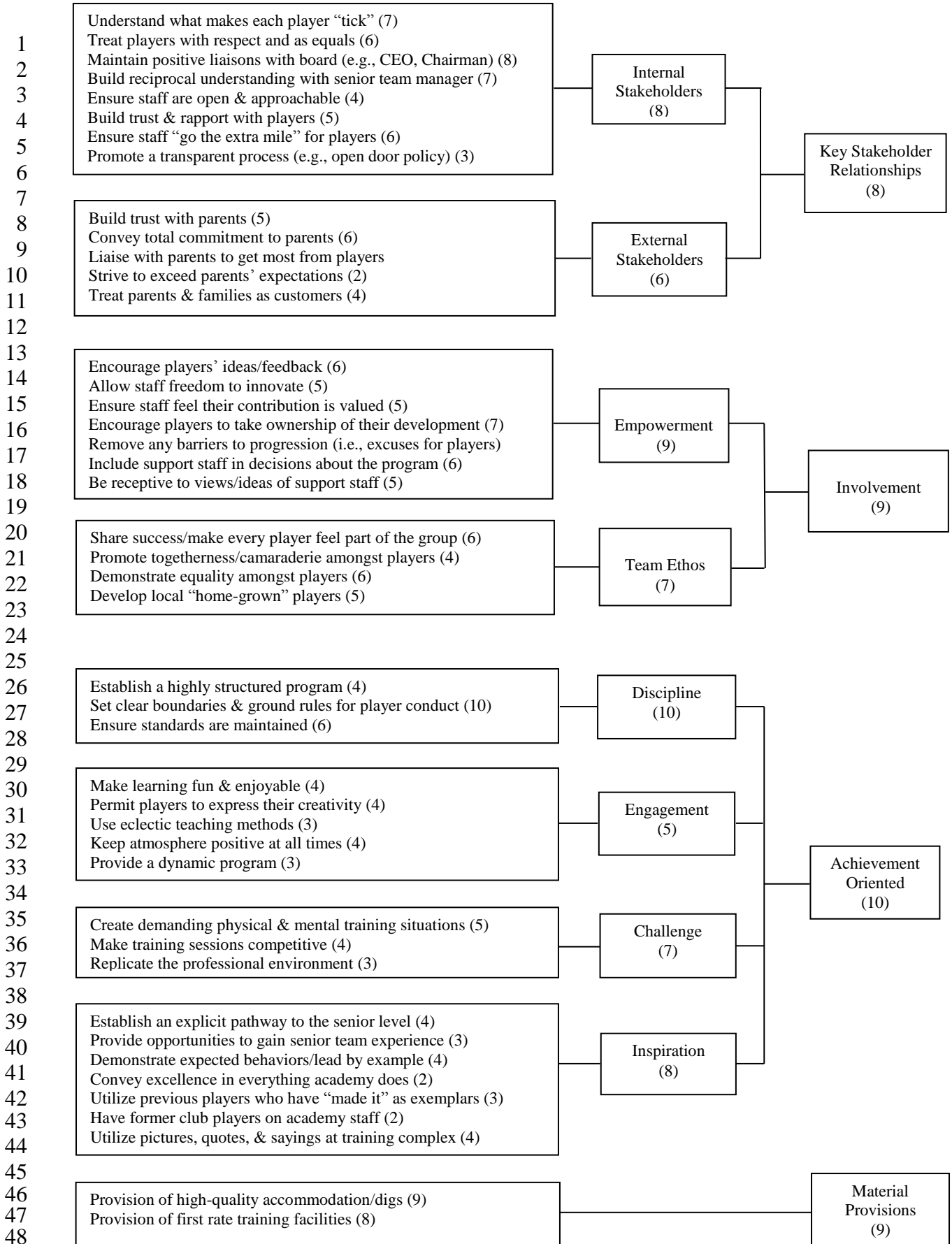


Figure 1. Toward an understanding of optimal development environments within elite English soccer academies: Higher- and lower-order themes (parentheses refer to the number of coaches cited).

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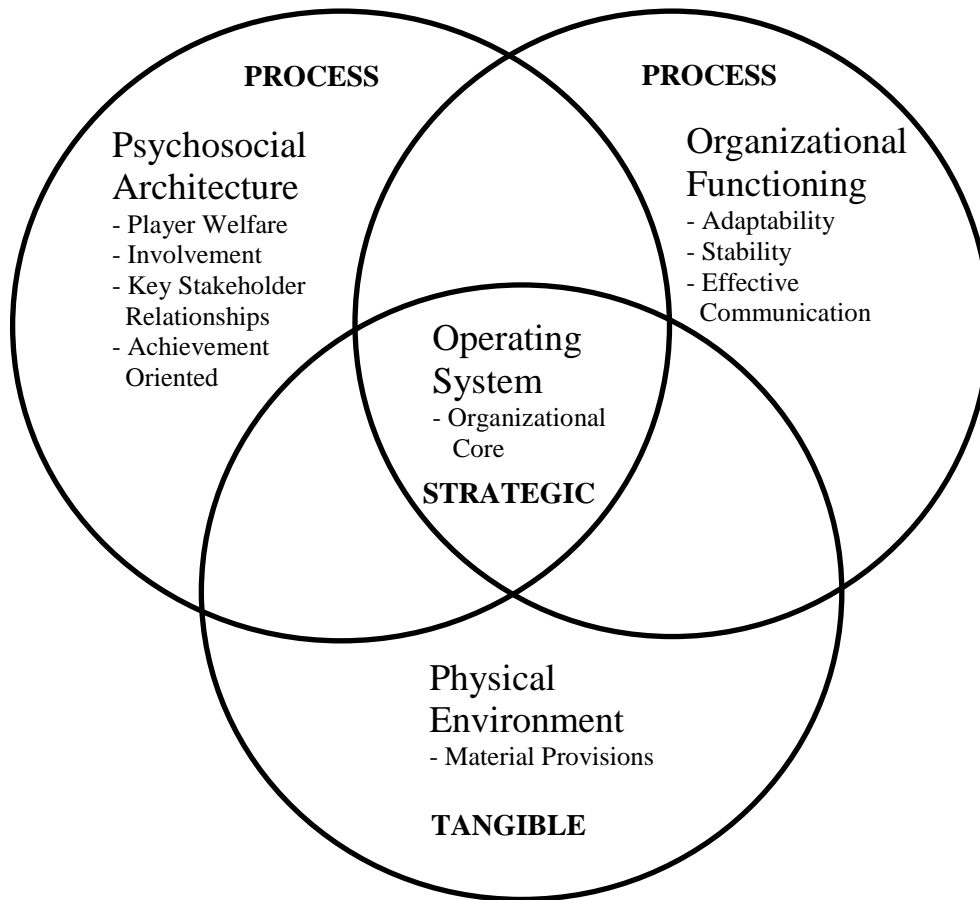


Figure 2. Toward an understanding of optimal development environments within elite English soccer academies: A conceptual model of the interrelationships between key factors.