

Successful talent development environments in female Scandinavian Handball: Constellations of communities of practice and their implications for role modeling and interactions between talents, senior players and coaches

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Abstract

Talent development is a sociocultural affair. The social learning perspective is rarely used for the study of talent development in sport, although it is broadly known in the domain of education. This article examines the way in which communities of practice are connected within two successful handball clubs, what characterises talents' movements across communities of practice within the club, and what characterises the interactions between talents, senior players and coaches. Drawing on Wenger's notion of communities of practice, constellations of interconnected practices and boundary encounters, it identifies how the two environments were characterised by (1) a well-functioning constellation of several CoPs, (2) opportunities for talents to participate and engage in various CoPs (3), individually adjusted feedback from coach to player combined with communication between the players with different positions in the CoPs and not only coach instructions, and (4) senior elite players' engaging behaviours in regard to newcomers in the boundary encounters and thereby legitimate peripheral participation opportunities for talented players. (5) The coaches were the key to coordinate the interconnected practices and social interactions between the 'youth CoP' and 'senior elite CoP'.

Keywords: Coaching, role models, talent development environment

Introduction

Over the past decade the talent development research has shifted in focus from the individual talent to the talent-in-context. Rather than approaching 'talent' as a property of individuals, this cultural turn (Ryba, Schinke & Tennenbaum, 2010) in talent development research takes a situated and relational approach to talent. As an example, Barab and Plucker (2002) advanced a perspective on talent that acknowledges persons-in-situation and locates talent and ability fundamentally in the dynamic transaction among the individual, the physical environment, and the socio-cultural context. Although Barab and Plucker's work concerned learning and talent development in education, their approach to talent has influenced and proven to be applicable in a sporting context as well (Araujo, 2007; Christensen, Laursen, & Sørensen, 2011; Croston, 2013; Johnson, Edmonds, Jain, & Cavazos Jr., 2010; Lund, Ravn, & Christensen, 2014). In addition, researching the successful athletic talent development environment case studies (Henriksen, Stambulova, & Roessler, 2010a, 2010b, 2011; Larsen, Alfermann, Henriksen, & Christensen, 2013) have contributed to our understanding of how the context and learning in the presence of others

influence the development of the individual athlete. Talented young athletes in a Scandinavian sport context typically participate in and move across several *communities of practice* both within and across a number of environments aimed at stimulating their athletic development (Bjørndal, Ronglan, & Andersen, 2017; Agergaard & Ronglan, 2015).

Role models have been documented to play a vital role in talent development environments, and it has been noted that youth athletes benefit from interactions with senior elite athletes who potentially act as role models (e.g. Balish & Côté, 2014; Martindale, Collins, & Abraham, 2007; Seanor, Schinke, Stambulova, Ross, & Kpazai, 2017). Recently, role modelling as a form of social learning was described as an untapped resource in sport psychology and youth athletes' role models seem to have important implications for career and identity construction (Ronkainen, Ryba, & Selänne, 2019). However, no studies have specifically focused on the structure of an organisation (e.g. handball club) and the implications for role modelling and interactions between talents, senior players and coaches.

Although the social theory of learning and the notion of communities of practice is broadly applied in research on education in general and physical education in particular (Kirk & Kinchin, 2003; Kirk & Macdonald, 1998; Kirk,

Macdonald, & O'Sullivan, 2006; Light, 2006, 2011) and in studies of sport coaches' learning (Culver & Trudel, 2006; Culver, Trudel, & Werthner, 2009), it is not commonly used as foundation for the study of elite sport or talent development in sport.

There are only a few Scandinavian studies applying social theory of learning and the notion of communities of practice as the theoretical framework for exploring talent development. A study on situated learning in youth elite football (Christensen, et al., 2011) showed concepts such as community of practice and *legitimate peripheral participation* are adequate for the study of organisation of skill learning in small position specific groups. A study on high-performance team sports contexts (Ronglan, 2010) revealed how the tensions between cooperation and intra-team competition are embedded in the team sport context and how the intra-team competition was viewed as a mark of quality. A study on player migration and talent development in elite sports teams (Agergaard & Ronglan, 2015) compared inbound and outbound career trajectories in Danish and Norwegian women's handball. In these studies, intra-team dynamics and learning was illuminated using communities of practice as analytical frame for a team or a smaller group. Identity formation has been studied in an Australian surf club (Light, 2006). This study highlighted how joint participation in the club's practices over time provided the new and young athletes with resources for understanding the particular culture of the club.

Our study extends previous literature on athletic talent development environments by integrating the organizational level of analysis with a social learning perspective on talent development, and more specific to explore (1) successful talent development environments as constellations of communities of practices (2) the young athletes' movements across communities of practice within the environments and how these are interconnected and coordinated, and (3) their implications for role modeling and interactions between talents, senior players and coaches.

Conceptual framework

Learning (i.e. talent development) is not merely *situated in practice* as if it was some independent process that just happened to be located somewhere; learning *is* an integral part of social practice in the lived-in world (Hodkinson, Biesta, & James, 2008; Lave & Wenger, 1991; Wenger, 1998). Therefore, talent development is considered a fundamentally social phenomenon reflecting humans as social beings.

Community of practice (CoP) is a core concept in Wenger's social theory. CoP is not a synonym for group, team or network. It is first and foremost "shared histories of learning" (Wenger, 1998, p. 86) and formed by people who engage in a process of collective learning in a shared domain of human enterprise. Three dimensions characterize a CoP: (1) mutual engagement; (2) a joint enterprise; and (3) a shared repertoire. Mutual engagement is what members are actively doing together (Wenger, 1998) and it requires interactions that sustain dense relations organized around activity. Joint enterprise is like rhythm in music. The joint enterprise is a result of a collective process of negotiation that reflects the full complexity of mutual engagement, which means that an enterprise is a resource of coordination, sense-making, and mutual engagement (Wenger, 1998). Shared repertoire is a multifarious collection of specific activities, symbols or artefacts that belong to the practice of a community pursuing an enterprise; it covers the routines, tools, words,

stories, ways of doing things and gestures shared by the members of the CoP (Wenger, 1998).

A community of practice does not exist in isolation. People live and engage in several communities of practice. Sometimes they are related in such a manner that one can talk about a *constellation of interconnected practices*, for example a handball club, or a school. Treating a handball club as a single CoP would gloss over the discontinuities that are integral to the very structure of it. Instead, the everyday practices of players and coaches in the handball club may well be viewed as constellations of interconnected practices.

When we explore CoP and constellations, the boundaries of each single CoP become interesting in a talent development perspective. First, they are related to transitions, and transitions are potentially crises in an athlete's career (Pummell, Harwood, & Lavalley, 2008). Particularly critical is the transition from junior to senior (Stambulova, 2009). Second, the boundaries as well as the peripheries of the CoPs contain important learning potential. The terms boundaries and peripheries both refer to two types of the 'edges' of a single community of practice. Boundaries emphasize lines of inside and outside, membership and non-membership, of a CoP. They arise from different enterprises and mark the differences between shared practices in one CoP and another. Boundary encounters may offer learning opportunities in their own right, because a boundary interaction is usually an experience of being exposed to a foreign competence (Wenger, 2000). Learning at the boundaries differs from learning at the centre of communities where "learning takes place because competence and experience need to converge for a community to exist" (Kerosuo, 2001, p. 57). Therefore, boundary encounters can be considered an important organizational structure to support the young athletes learning and development in team sport.

Role models have been identified as one important element in the construction of adolescent identities and future careers (Savickas, 2013). Through role models, talents can become aware of the career options and ways to cope with adversity and challenges in their development. Role models help young talented athletes envisioning what kind of people they want to become and what is possible for them (Ronkainen, et al., 2019).

Methods

We selected a multiple case study design (Hodge & Sharp, 2016; Stake, 1995) to explore, from multiple perspectives, the complexity and uniqueness of a specific bounded case. In line with the holistic ecological approach we took a contemporary and real-time view of the two Scandinavian handball clubs (Henriksen & Stambulova, 2017). Following the example of Agergaard and Ronglan (2015) we opted for a multiple case study of what can be described as "most similar cases" (Gerring, 2007). As such this study is based two examples of Scandinavian handball clubs. Talent development in handball in Scandinavia has developed under similar conditions through voluntary organization in clubs. The case study aimed to produce insights and facilitates the understanding of social learning and processes within a Scandinavian sport context.

Case selection

We used a purposeful sampling process (Neergaard, 2007) to select cases for inclusion. We selected two most similar clubs as cases – one in Denmark and one in Norway – based on three inclusion criteria: (1) the clubs were successful in talent development, i.e. they had demonstrated sustained

and consistent ability to create senior elite athletes out of their talented juniors (Henriksen et al., 2010a); and (2) they were recognised as a great environment for athletic development by the national federation. Furthermore, (3) as a premise for qualitative research, they were open and willing to share details of their day-to-day practices with the principal researcher. Handball is a sport in which Scandinavia is highly successful, both in terms of talent development and in terms of international rankings and championships (Ronglan, 2012).

Presentation of cases

We chose to research clubs, as they are the primary everyday arena for development of players. The two cases were developmental environments for handball players' striving for improvement; they had two youth teams and two senior teams related to talent development and had their best senior team in the top of the national league. The clubs differed in organizational set-up: Case 1 was characterized by a professional and formal system with a coordinated effort between college, school and club (a boarding school Academy model). Case 2 was a voluntary based handball club, which is a traditional way of organizing sport participation in Scandinavia (Bjørndal, Ronglan, & Andersen, 2017).

Context of cases

Scandinavian countries are extraordinary successful handball nations. The Scandinavian sports model is characterised by a sport-for-all concept which has also been seen reflected in the pathways to the elite (Storm, Henriksen, & Christensen, 2012). Scandinavian sport includes both democratic and competitive approaches to sport development, which have a somewhat ambivalent relationship (Peterson, 2008). This is different from what is proposed in the international literature on talent identification and development emphasizing the

importance of professionalized national systems for early identification and systematic athlete development through a hierarchical path that distinguishes clearly between mass and elite sport (Bjørndal et al., 2017). Contrary to many other western societies, sport activities in the Scandinavian societies is not something that is primarily 'offered' by the local government, the school or the private providers; its rather something that to a large extent is 'produced' by the locals themselves.

Data collection: Participants, instruments and procedures

An overview of the data collection is presented in Table 1. Observation, semi-structured interviews with various stakeholders, and document analyses were used to uncover the cases. The observation and interview guides were created to cover both the organizational and team level characteristics.

We obtained *in situ observations* (Thorpe & Olive, 2016) as the primary data generation method because it provides an evident view on what people are actually doing in contrast to the interviews where people mainly talk about what they are doing (Tanggaard & Brinkmann, 2010). The principle researcher conducted fieldwork in each club in high season for a four-week period, approximately 150 hours in case 1 and 100 hours in case 2. The observation was used to explore the constellations of communities of practices (e.g. mutual engagement, shared repertoire), and it provided a solid basis for the interviews. The observations focused mainly on the interactions, communication and relationships between the youth players, senior elite players and coaches across different activities and situations. Fieldwork was carried out at several locations, first and foremost at the clubs' home arenas, other handball clubs and the colleges associated with the participating clubs.

Type of data	Case 1	Case 2
Fieldwork		
Observations	4 weeks in high season (approx. 150 hours).	4 weeks in high season (approx. 100 hours).
Informal interviews	Director Volunteers Other club coaches Teachers Physiotherapist Players that are not participating in qualitative interviews Parents Team leaders Fans	Board members Volunteers Other club coaches School handball coach Physiotherapist/chiropractor Players that are not participating in qualitative interviews Parents
Semi-structured interviews	3 handball coaches 1 physical coach 1 sports manager 1 head of college 3 senior elite players 3 (+4) under 18 players 1 retired player (17 interviews)	3 handball coaches 1 chairman of the board 1 marketing manager 2 senior elite players 2 under 18 players (9 interviews)
Documents	Webpages from club and Danish Handball Federation	Webpages from club and Norwegian Handball Federation

Table 1: Overview of data collection in case 1 and case 2

The principal researcher observed several different activities: handball training, physical training, matches (home and away), tactics meetings, player meetings, small talk before and after training or matches, and injury treatment. Thus, she participated moderately, but principally explored the communities of practices from observer-as-participant perspective (Atkinson, 2017), which means the main role in this position was to collect data. She obtained a position as legitimate participant in the social periphery, (i.e. interacting with the participants in the social processes but making no pretense of actually being a participant). The observations-as participant perspective (e.g. giving feedback when asked, helping with practical issues when needed, participating in conditioning training) gave the principle researcher a profound idea of the entire environment and for what was valued (Krane & Baird, 2005). The principle researcher wrote field notes as jottings and then converted them into full notes.

Semi-structured interviews were collected during the second and third week. The interviews followed an interview guide that was adapted to the case and the person; and was helpful in order to construct meaning from the observations. The interviews were tape recorded and lasted between 30 and 90 minutes. Informal interviews were conducted with the director of the sports club, board members, volunteers, coaches, players, physiotherapists, parents, and team leaders. The principle researcher conducted 17 semi-structured interviews in case 1 and nine in case 2. The semi-structured interviews and informal interviews with a wide range of actors contributed to understand the mutual engagement, shared repertoire and joint enterprises, but also to get an understanding of the wholeness and complexity of the specific bounded cases (Hodge & Sharp, 2016)

Analyses of documents started in advance to prepare for the fieldwork and continued throughout the whole period of the study to facilitate understanding of the environment. The documents included: the web site, pictures, posters and value-statements.

Data analysis, rigor, and ethics

After the interviews were transcribed, we read the transcripts and field notes several times, made notes and discussed their content and form in the author team meetings. The analysis was based on a systematic combining approach (Dubois & Gadde, 2002) grounded in an abductive logic, which was a process of constantly going back and forth from excerpts in the data material in a non-linear movement between asking questions and generating assumptions. The analysis process proceeded in three stages: open coding, organising data into topics and focused analysis and interpretation of discrete parts. Since we wish to understand social processes and given the purpose of the paper, we were focusing only on excerpts from the data that detail the social interactions significant for the transition from junior to senior. During this step the social theory of learning (Wenger, 1998) and viewing the clubs as constellations of interconnected practices framed the analysis.

Throughout the process, the second and third author acted as critical friends, offering feedback and their interpretations of the emerging themes. The descriptions and interpretations were shared with people within the field, who provided member reflections (Smith & McGannon, 2017), which nuanced our understanding of the cases. We adhered to the national ethical data protection guidelines. We provided the participants with information about the project, aim of the study, and their rights (e.g., hidden identity, drop out at any time). Prior to the

interviews informed consent was received from the interviewees.

Findings

First, we characterize the talent development environment as *constellation of interconnected communities of practices* with particular emphasis on the ways in which several CoPs are connected within the talent development environments. Then, we analyse the young players' movements across the various communities of practice within the club, and their experiences of such learning trajectories. Finally, we provide an analysis of the interactions between talents, senior elite athletes and coaches, which was crucial for the young players' participation and trajectories across various CoPs.

The talent development environment as constellation of communities of practices

From an overall perspective the clubs constituted a complex formation of several smaller groups that in a learning perspective can be viewed as CoPs: under-16, under-18, senior elite, goalkeepers, injured players, and coaches. The clubs were characterised by the fact that they provided *interconnected practices* across these CoPs. In both clubs the connection between the under-18 CoP and the senior elite CoP was a strong constellation because they trained together on a regular basis and their practices were interconnected and coordinated. In figure 1 we show how the 'youth CoP' and the 'senior elite CoP' may be seen as two separate and yet interconnected CoPs.

One significant feature of the clubs was that they can be seen as constellation of *interconnected practices*. The talented youth players did not just participate in their own age-specific team in order to develop. Instead, they participated across several CoPs that were contexts for individual sociocultural learning trajectories. The coaches selected the youth players that should have the opportunity to participate in handball sessions in the 'senior elite CoP', thus they can be considered important gatekeepers for learning opportunities. During the fieldwork we observed seven talented youth players (in each club) participating in the 'senior elite CoP'. There was no handball session for senior elite players without participation of at least two youth players. Besides participating in the actual training, youth players had the opportunity to watch the training session since they often practiced themselves on the same court in the same arena, either just before or after the training of the 'senior elite CoP'. In regard to match-play, selected youth players were offered participation in the senior elite matches. In case 2 three under-18 players were actually full members of the 'senior elite CoP', while in case 1 they mainly were legitimate peripheral participants. In case 2 a CoP had emerged *in between* the youth CoP and senior elite CoP – the second division team – which we may call the 'in-between CoP' (cf. figure 1). This CoP had a mutual engagement in match-play and the players' joint enterprise was individual development through 'dare trying and dare making mistakes. The head coach described the idea of this CoP: "We assign a lower priority to the result of the match. We prioritize the players having the opportunity to 'dare to try', and as many as possible must have this opportunity" (head coach, case 2). The boundary encounters, overlaps and peripheries were important contexts for the youth players' learning and development. It is these significant features that allow us to speak of a constellation of interconnected communities of practice (CoP). In the following sections we will explore the ways in

	Youth Community of Practice	Interconnected practice	Elite senior Community of Practice
Age	16-18 years		19-30 years →
Position	had different positions on court		had different positions on court
Level	differed in level of performance		differed in level of performance
Range	From peripheral youth players at regional level to national team players that had won youth world championships	Talented youth players are included in the 'senior elite CoP' Establishment of a 'in-between CoP'	From peripheral first-year senior players to world-class players who had won medals at the European or the World championship
Mutual engagement	Improve individually Become an elite adult handball player	Play matches in second division Talented youth players play upwards	Improve the team performance Improve individually as an elite player
Joint enterprise	Learn skills in match-play and in training Physical training	Observe each other's training in the same facilities Dare trying and dare making mistakes	Improve individually and as team in training and match-play Tactical preparations for match-play (video analysis of opponents and tactic meeting)
Shared repertoire	Handball specific skills, drills, routines, terminologies, hierarchies etc. produced and used in the group	Handball specific skills, drills, routines, terminologies, hierarchies etc. produced and used in the group	Handball specific skills, drills, routines, terminologies, hierarchies etc. produced and used in the group

Figure 1: Constellation of community of practices in successful talent development environments related to the

which players and coaches participated in boundary encounters and moved across communities of practice.

Youth players' participation and engagement across various communities of practice

The central players from 'youth CoP' were participating regularly in the practice of 'senior elite CoP'. During the fieldwork period seven talented youth players (in each case) shared their practice with the established senior elite players regularly. Some players were full members of the 'senior elite CoP' (Case 2), even though they were not yet seniors. Other under-18 players were peripheral participant in the 'senior elite CoP'. The connections between these CoPs were practice-based. At every handball session and every match-play we observed how the 'senior elite CoP' opened the periphery and included the under-18 players as legitimate peripheral participants. Thus, providing peripheral experiences (through observation or participation) to the youth players connected the two CoPs. Youth players were offered legitimate access to a practice without subjecting them to the demands of full membership.

'In high season physical training has low priority. We do recovery training. For most of the players it is not a goal to become stronger in this period, but Christina, Lea, Maria and Maya for example, they cannot 'afford' two months without quality resistance training. In case of Maya it is because she is young, whilst in the case of Christina, it is because she is not used to this culture from her previous club.' (Head coach, case 2).

The head coach is aware of a variety of levels of participation in the CoP. Both the core of the players and the peripheral youth players. Good community architecture invites many levels of participation (Wenger, McDermott & Snyder, 2002), in this case the coach was coordinating the

variety of players and their individual development. Different players participate in this CoP for several reasons some because they are developing their skills in a long-term perspective (the talented youth players) others to perform well ahead of a selection for the national team (senior elite players).

The youth players' experiences of playing upward

The talented youth players' experiences of participating in various interconnected communities of practice were predominantly positive. And a precondition for their positive attitude were, according to several youth players, that the full members of the senior elite CoP were relatively young. As one of the under-18 players in case 2 said:

'There are many young players [at the senior elite team]. We are good at keeping the average age low. Then the road to the top is not that long for us because those who play at the elite level are perhaps 3-4 years older than us. Then you are kind of in the same stages in live.' (under-18 player, case 2)

This exemplifies how it was important for the talented youth players to have someone to look up to and to relate to them as role models. They believed that they could become like their role models (the road is not that long), and thus the elite players could offer inspiration and motivation in the daily lives of the talented players. They became important for their adaptability, motivation and persistence in the development – especially at this critical moment of preparing for the transition from youth to senior.

Case 1 and case 2 were similar in the way they created situations where youth players participated and were engaged in different practices. In case 1 some of the

under-18 players were frequently participating in handball sessions with the 'senior elite CoP'. An under-18 player reflected over her first experience at a match play with the senior elite team.

'It was a bit difficult at first. I was very humble because I thought about how the positions in the hierarchy was and whom I were supposed to run with and what if I by mistake pushed or did something else wrong. Then it was comforting that during the warm-up you had to concentrate on your own performance. You know what it takes to be ready and warm. You just have to adapt. I ran with Emma first [another under-18 player who had been on the team before] and then I adapted from there.' (under-18 player, case 1).

Thus, the player describing the entrance to the senior elite CoP as uncomfortable, however, she was not excluded but accepted as peripheral participants. The newcomer used one of the peripheral players (Emma) as support in understanding the shared repertoire. The key to good community participation and healthy degree of movement between levels is to design them in a way that allow participants at all levels (e.g. periphery, active, core) to feel like full members (Wenger, et al., 2002).

'There is a big difference when practicing with the senior players. Often the game is faster and the players are stronger and there is a big difference in regard to attack in their defence. I learn a lot by participating. For the most part I look at how the players in my position [left back and playmaker] dare to try and shoot' (under-18 player, case 2).

The young players referred mainly to the other players at the same position (e.g. left wing or goal keeper) as role models within their environment. The position-specific role models were considered open and accessible as a learning resource. The talented players were dependent on the senior elite players' openness and willingness to share, which highlight efficient role modelling as a two-way process:

'I think they are very good at guiding us during the sessions. If I do something 'incomplete' and they see what my intentions were, then they are good at teaching me "it is really good but try to turn your hand a little more, then it will be there every time"' (under-18 player, case 1).

An under-18 player from case 2 said, 'The elite players are very nice and they give us useful tips, which is really great'. However, the head coach was a key figure in regard to expect this openness and willingness to pass on experience and knowledge and orchestrate the relations between various players.

The social interaction between senior elite players and youth athletes

The senior elite players' behaviours had great influence on the youth players' learning within the club. The senior elite players were open for newcomers. It was obvious that this was a necessity for the maintenance of their team as a community of practice. They were used to newcomers, such as under-18 players, players from other clubs and new teammates. A part of the shared repertoire was that all players and staff members gave each other 'high-five' as a way of saying hello (in case 1). This ritual was consistent and had no exceptions. A young player told about her transition from youth to the senior elite squad said:

'The ritual of saying hello to all has meant a lot to me. A single smile means the world when you say hallo to one another and get around everyone. In this way we avoid that there is one person you never say hello to because you do not have the nerve to approach the person yourself. In our club you are forced to approach the person since 'high five'

is something you have to do.' (First year senior elite player, case 1)

The senior elite players' actions were an important factor in regard to the talents feeling included or not, and thus important to their learning. However, there were a clear hierarchy that was visible and accepted. A professional player said:

'The under-18 players shall not be like one of us, they have to work their way up. However, they still have to be treated like us. In the course of the training session they are just like one of us. They are part of the systems and actually 'run with us' (i.e. challenges them physically). After the training session they are still sitting by themselves.' (professional senior elite player, case 1).

The senior elite players perceived the youth players as 'one of them' during training, which means that they are not just peripheral participants, but *legitimate* peripheral participants, which is a crucial difference in order to get 'access' to the knowledge inherent the CoP. For example: *'During the handball session I notice that the players on the right back communicate a lot during the session. The coach takes a break in his own instruction to make space for the two to finish their evaluation before he starts again. The two players in question are respectively an under-18 player and an established elite player. The established player acknowledges the younger. Many players evaluate themselves and each other while the coach swaps between who plays attack and defense.'* (observation note, case 2).

A professional senior elite player from case 1 said: *'I would like them to just approach me [during sessions]. Because just as much as we have a responsibility to integrate them, they also have a responsibility themselves'*. This quote illustrates that it requires social competences from the newcomers in order for them to be accepted as legitimate peripheral participant. And the legitimate peripheral participation requires a mutual engagement in the boundary encounter between the talented youth player and the senior elite player.

The relationships between talents and senior elite players were also beneficial to the elite players, not only the youth players. A professional senior elite player said:

'As a matter of fact, I have reflected upon the last few times when Emma has been on the team, that she just jumps in and win 'one against one' situations. She just has the physical strength and dare to take the shot. Sometimes I find it very inspiring and even if she is a youth player it's super cool to watch.' (senior elite player, case 1).

The senior elite players were forced to 'be on their toes' and be aware of their own performance and development compared to the up and coming young talented players: *'I think it's good that the younger players are hungry and eager to perform well then we must sharpen our performance a little. This is great.'* (senior elite player, case 2). These interactions between senior elite players were characteristic for the talents' movements across CoP.

The players' mutual interaction was affected by the fact that they were identifying themselves with a certain position, not just as a proximal role model, but also as a 'position identity'. A goalkeeper told how she was looking forward to her fellow goalkeeper's return from an injury. *'She was one of the reasons why I moved to this club. I am looking forward to her return and our cooperation because she is opposite me. She is good at some of those things where I am not. She is really good at getting the game started and on top of that she possesses a good work ethic, which inspires me.'* (under-18 player, case 1).

The role models within the environments were typically players who have the same position on court, and they were beneficial in the process of becoming elite.

Because they represented pathways, skills and achievements that are considered attainable.

The positive stories about how to learn from other players in the same position did also include the dilemma and inherent tension between cooperation and competition, but these were mainly related to players at a similar performance level.

'When my teammate does well in my position, then I often feel happy and applaud, because I think it is great what she does, still at the same time however I also find myself bitter, but I think that we are really good at using each other. The other girl in my position is really good at performing the assists and this I find inspiring. So, at this she is helping me. On the contrary she needs to build more self-confidence and make decisions and here I help her by saying "I know you can."' (under-18 player, case 1).

Thus, the interactions among the players also had inherent tensions related to cooperation and competition, which is "structurally embedded in the team sport context" (Ronglan, 2011, p. 161). However, the coaches down-play this element, and emphasize the significance of individual development, and as such they handle the internal competition. But from the players' perspective the internal competition is still visible and present. Ronglan (2011) has stated that "...internal competition, however, cannot be 'removed' from the field; it has to be handled." (p. 162), and emphasize in a study of a successful elite team that the internal competition was regarded a quality marker (Ronglan, 2000, 2007). This study supports his finding, even though this a talent development context; however, it is to be said that it is a matter of balancing on a 'knives edge' in regard to handle this tension between cooperation and competition.

The key function of the coaches was to emphasize the importance of sharing knowledge and experience, while deemphasizing internal rivalry. The coaches had the authority as coordinators of the CoPs, which is a critical role to a community's success (Wenger, et al., 2002). The coaches first and foremost fostered the development of the players and planned and facilitated training, which is the most visible aspect of their role, secondly they also informally linked community members (i.e. youth players and senior players, or players at same positions), and they were crossing boundaries themselves between the different teams and training groups as distributing knowledge.

The social interactions and communication among coaches and players

The social interactions and communications among coaches and talented players were generally characterized by individual feedback from coach to player, and communication between the players (not only coach instructions) The coaches approached the youth players and the senior elite players differently in training. During observations it was clear that there were two modes of communication. All signs and implicit communication were consistently made visible for the newcomers either by the coaches or by the established members of the 'senior elite CoP'. During the observations the head coach regularly managed to give individual feedback to the youth players, and at the same time prepare the elite players for an important match. The coach adjusted his communication to the individual player:

'A handball session following a defeat begins with a verbal reminder from the coach. He requires focus from the players to avoid the small technical mistakes. There is a chance that they can win bronze in the national league. At today's training two under-18 players are participating. The first exercise is "shots at goal" in a 2 against 1 game. During the training session, which in fact has been run in a

rough and serious atmosphere, the coach suddenly changes tone while turning directly to the one under-18 player to evaluate on her performance and says, "well done Maya", and he gives her detailed instructions.' (observation note).

This observation note illustrates that the coach immediately changed his mode of communication from when he approached the developing player (Maya). In the situation Maya was included in the charge of the match-play, but because she was in a developmental phase that was more important than the collective performance the coach paid specific attention to her legitimate and still vulnerable position being a developing peripheral participant.

The coach as key to coordinate the interconnected practices

Each squad of players had a team of coaches: one head coach, one or two assistant coaches, and a goalkeeper coach. The coaches had mutual connection and cooperation, and as such they could also be seen as a distinct 'coach CoP'. The coaches regularly shared their experiences, talked about the players' development and planned the training. In case 2 the head coach for under-18 squad was assistant coach for the senior elite team, and a female coach assisted both teams. This structural feature of the environment was related to a coherent organisation that supported the talented players' learning.

The coaches were in a key position of managing the players' movements in the above described constellation of communities of practice. In both clubs the coaches were very much aware of their own role in facilitating the talented players' opportunities for movements across several CoPs and especially for the players' legitimate peripheral participation in the 'senior elite CoP'. The coaches were not just engaged in their own team. At an organisational level, the head coaches' behaviours and philosophies were regarded as crucial to the success in producing senior elite players from among their juniors. For example, the head of executive board constructed a direct link between the success of developing athletes and coach resources:

'We have had a strategy for several years around the youth players, which has been very good. The reason is our coaching resources coming from a specific local club. Our head coach and another coach who is in our neighbour club come from the same milieu. They have had a crucial influence from there and have developed an interest in coaching. Their cooperation and sparring maintain the strategy and develop them as coaches.' (head of executive board, case 2).

There are many factors and micro- or macro sociological variables that influence the success in developing talent. But the quality of the head coaches for the senior elite squad was of crucial significance to the movements of the talented players across several CoPs. The coaches prioritized developing talents from among their junior players. They cared about the youth players and were specifically attentive to their well-being and growth. Several players emphasised this quality of the coach as one of the reasons for the success of the environments.

'She is just aware of everyone around her. She talks to the young players and cares about how they are doing. She can help them upwards. If for instance Anna is sad, she can ask me to go and talk to her and then suddenly I have helped her right? It's a very good opportunity for them to develop to a higher level.' (senior elite player, case 1).

This quotation illustrates that for this head coach successful talent development is about caring for the young

players and sharing the responsibility for the players' well-being with the whole CoP.

To sum up, the findings of two successful talent development environments in the Scandinavian elite sport context make us highlight the following points: A way to understand the success in the two handball clubs, as seen from a social learning perspective, was interconnected practices between the 'youth CoP' and the 'senior elite CoP', notwithstanding one of the clubs was a professional handball club and the other was a voluntary based club. This feature created opportunities for youth athletes to participate and engage in various CoPs. Boundary encounters may offer learning opportunities in their own right, because a boundary interaction is usually an experience of being exposed to a foreign competence (Wenger, 2000). Therefore, interconnected practices can be considered an important organizational structure to support the young athletes learning and development in team sport. The senior elite players' engaging behaviors in regard to newcomers influenced the talents' peripheral participation opportunities. The coordination of the constellation of communities of practice and the individual learning pathways were managed by a well-functioning community of coaches.

Discussion

This study contributes to previous research on successful talent development environments (e.g. Henriksen et al., 2010; Larsen et al., 2013) by zooming in on the organizational structure that facilitated social interactions among youth athletes, senior elite athletes and coaches.

Acknowledging the variety of micro- and macro sociological variables that influence the talent development process, this article cannot deliver a detailed analysis of all relevant arenas in which the athletes develop both within the club and outside the club, but rather tries out and discusses possible ways in which we understand the complex constellation of several communities of practices and its implications for role modeling and interactions between talents, senior players and coaches. The transition from junior to senior was a social practice where the dynamics of communities of practice was the fundamental unit for the transfer of knowledge and skills (Ronglan, 2011). The analysis showed that the organizational structure with interconnected practices of youth and senior players facilitated a distribution of knowledge and facilitated role modelling. Previously athletic career researchers found that most youth athletes admired successful and highly skilled athletes with commitment and work ethic, but also people with balanced lives (Ronkainen et al., 2019). If these role models are to be found in the everyday environment it is possible that the transition is better facilitated. In this study the analysis shows how the coaches and the professional senior elite players were key in facilitating these interconnected practices.

The boundary practices seemed to establish individual trajectories in and out of several communities of practice that contribute to optimal development of individual skills, capabilities and identities. In line with Wenger's conceptualisation of communities of practice, boundary encounters (Kerosuo, 2001), and peripheries (Wenger, 2000), this study points to practice-based connections between youth CoP and senior CoP within an organisation, as containing a major learning potential in regard to talent development. However, young athletes usually relate to not only one single, but multiple arenas, which influence their sporting development (Christensen & Sørensen, 2009; Henriksen et al., 2010a, 2010b, 2011; Martindale et al.,

2007; Wylleman & Lavallee, 2004). Therefore, future research could use the same conceptual framework but explore other constellations of interconnected practices (e.g. national team and club team; school practice and club practice)

It has previously been stressed that proximal role modelling is a vital learning process in athletic development (Henriksen & Stambulova, 2017). Successful talent development environments include prospective and current elite athletes; furthermore, it provides opportunities to train with the elite athletes. This study illustrates the need for elite athletes who are willing to pass on their knowledge. In team sports (airtight) boundaries between athletes at different age-groups and skill levels is a traditional structure, and in a study in the context of football, the transition from youth to senior was also highlighted as a difficult transition that was little supported by the organisational structure in a professional club (Larsen et al., 2013). Furthermore, senior elite players could consider newcomers a threat because only a set number of spots are available at a team, which is providing tension that needs to be handled (Ronglan, 2011).

More experienced peers are not merely a source of information about being an elite athlete; they also represent the history of the practice as a way of life and the process of becoming an elite athlete. They are living examples of possible trajectories (Wenger, 1998), this type of role model seemed to be a resource in these two clubs because the coaches first and foremost managed them as such. Therefore, an organisational structure that supports this process seems to be crucial in talent development environments, and in the light of the study of Ronkainen and colleagues (2019) it could be significantly important to female youth athletes because it provides the talented athletes with the opportunity of 'engaging with' their own future, as embodied by the experienced elite athletes. Female athletes tend to be concerned about the relationships and similarities between role model and self (Ronkainen et al., 2019), which this study support. The youth players' interactions with role models on an everyday basis benefited their skills development and sociocultural learning, and their satisfaction and well-being.

Furthermore, an important consequence of approaching the team in ball games as a community of practice with a constellation of interconnected practices is that it invites us to see the role of the coach in a new perspective (Ronglan, 2010). The coach then could be viewed as an orchestrator rather than an instructor (Jones, 2007; Jones, Bailey, & Thompson, 2013; Santos, Jones, & Mesquita, 2013) or as a cultural leader (Henriksen, Storm, & Larsen, 2018) and when it comes to talent development, other than performing as a team, the core tasks are developing a variety of important skills, maintaining motivation, help balancing sport and school, and balancing deliberate practice and recovery. In talent development the orchestration of the athletes includes the coach being aware of the diverging types of trajectories (e.g. marginalized or inbound trajectory of the legitimate peripheral participant) and to act according to them within the organization. It also includes mediating the mutual engagement between young talents and established elite athletes in order to transmit and embed proximal role modelling. Consequently, the coach needs fine-grained knowledge about each player and a range of leadership competences in order to provide a balanced practice and feedback so that the individual player is sufficiently challenged.

Applied perspectives

We suggest that team sport managers and coaches deliberately develop interconnected practices between young athletes and senior elite athletes to underpin the learning opportunity, not for the teams to succeed but for developing the personal excellence of each player. And in addition, coaches could initiate conversations around role models within the environments that can help young athletes in developing self-awareness and a clearer

understanding of the resources available in their everyday training environment. Asking young athletes to identify role models and to find out *how* these role models could be useful would be valuable in increasing athletes' awareness of how they could learn from others on an everyday basis, and what social resources they might need in the transition from junior to senior and thus to identify them in their own socio-cultural context.

References

- Agergaard, S. & Ronglan, L.T. (2015). Player migration and talent development in elite sports teams. A comparative analysis of inbound and outbound career trajectories in Danish and Norwegian women's handball. *Scandinavian sport studies forum*, 6, 1-25
- Araujo, D. (2007). Promoting ecologies where performers exhibit expert interactions. *International Journal of Sport Psychology*, 38(1), 73-77.
- Balish, S., & Côté, J. (2014). The influence of community on athletic development: An integrated case study. *Qualitative Research in Sport, Exercise and Health*, 6(1), 98-120. doi:10.1080/2159676X.2013.766815
- Barab, S. A., & Plucker, J. A. (2002). Smart people or smart contexts? Cognition, ability, and talent development in an age of situated approaches to knowing and learning. *Educational Psychologist*, 37(3), 165-182.
- Bjørndal, C. T., Ronglan, L. T., & Andersen, S. S. (2017). Talent development as an ecology of games: a case study of Norwegian handball. *Sport, Education and Society*, 22, 7, 864-877.
- Christensen, M. K., Laursen, D. N., & Sørensen, J. K. (2011). Situated learning in youth elite football: A Danish case study among talented male under-18 football players. *Physical Education and Sport Pedagogy*, 16(2), 163-178.
- Christensen, M. K., & Sørensen, J. K. (2009). Sport or school? Dreams and dilemmas for talented young Danish football players. *European Physical Education Review*, 15(1), 115-133.
- Croston, A. (2013). "A clear and obvious ability to perform physical activity": revisiting physical education teachers' perceptions of talent in PE and sport. *Physical Education and Sport Pedagogy*, 18(1), 60-74.
- Culver, D. M., & Trudel, P. (2006). Cultivating coaches' communities of practice: Developing the potential for learning through interactions *The Sports Coach as Educator: Re-Conceptualising Sports Coaching* (pp. 97-112).
- Culver, D. M., Trudel, P., & Werthner, P. (2009). A sport leader's attempt to foster a coaches' community of practice. *International Journal of Sports Science & Coaching*, 4, 365-383.
- Dubois, A., & Gadde, L. E. (2002). Systematic combining: An abductive approach to case research. *Journal of Business Research*, 55, 553-560.
- Gerring, J. (2007). *Case study research. Principles and practices*. Cambridge: Cambridge University Press.
- Henriksen, K., & Stambulova, N. B. (2017). Creating optimal environments for talent development. A holistic ecological approach. In J. Baker, S. Coble, J. Schorer, and N. Wattie (Eds.), *Routledge handbook of talent identification and development in sport* (pp.271-284). London, UK: Routledge.
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2010a). A Holistic approach to athletic talent development environments: A successful sailing milieu. *Psychology of Sport and Exercise*, 11, 212-222. doi:10.1016/j.psychsport.2009.10.005
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2010b). Successful talent development in track and field: Considering the role of environment. *Scandinavian Journal of Medicine & Science in Sports*, 20(Suppl 2), 122-132. doi: 10.1111/j.1600-0838.2010.01187.x
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2011). Riding the wave of an expert: A successful talent development environment in kayaking. *The Sport Psychologist*, 25, 341-362.
- Henriksen, K., Storm, L.K., & Larsen, C.H. (2018). Organisational culture and influence on developing athletes. In C. Knight, C. Harwood, and D. Gould (Eds.). *Sport psychology for young athletes* (pp. 216-228), New York, NY: Routledge.
- Hodge, K. & Sharp, L-A. (2016). Case studies. In B. Smith and A. C. Sparkes (Eds.), *Routledge handbook of qualitative research in sport and exercise* (pp.62-74). London, UK: Routledge.
- Hodkinson, P., Biesta, G., & James, D. (2008). Understanding learning culturally: Overcoming the dualism between social and individual views of learning. *Vocations and Learning*, 1(1), 27-47. doi:10.1007/s12186-007-9001-y
- Johnson, M. B., Edmonds, W. A., Jain, S., & Cavazos Jr., J. (2010). Conceptualizing the systemic interplay of athletic development. *International Journal of Sport Psychology*, 41(1), 1-23.
- Jones, R. L. (2007). Coaching redefined: an everyday pedagogical endeavour. *Sport, Education and Society*, 12, 159-173.
- Jones, R. L., Bailey, J., & Thompson, I. (2013). Ambiguity, noticing, and orchestration: Further thoughts on managing the complex coaching context. In P. Potrac, W. Gilbert, & J. Denison (Eds.), *The Routledge handbook of sports coaching* (pp. 271-283).
- Kerosuo, H. (2001). 'Boundary Encounters' as a Place for Learning and Development at Work. *Outlines. Critical Practice Studies*, 3(1), 53-65.
- Kirk, D., & Kinchin, G. (2003). Situated learning as a theoretical framework for sport education. / L'apprentissage situe comme cadre theorique pour l'education sportive. / El aprendizaje situado como marco teorico para la ensenanza deportiva. / Situatives Lernen als theoretisches Rahmenkonzept fuer die Sporterziehung. *European Physical Education Review*, 9, 221-235.
- Kirk, D., & Macdonald, D. (1998). Situated learning in physical education. *Journal of Teaching in Physical Education*, 17, 376-387.
- Kirk, D., Macdonald, D., & O'Sullivan, M. (Eds.) (2006). *Handbook of Physical Education*. London: Sage Publication.
- Krane, V. & Baird, S. M. (2005). Using ethnography in applied sport psychology. *Journal of Applied Sport Psychology*, 17(2), 87-107.
- Larsen, C. H., Alfermann, D., Henriksen, K., & Christensen, M. K. (2013). Successful talent development in soccer: The characteristics of the environment. *Sport, Exercise, and Performance Psychology*, 2(3), 190-206. doi:10.1037/a0031958
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
- Light, R. L. (2006). Situated learning in an Australian surf club. *Sport, Education and Society*, 11, 155-172.
- Light, R. L. (2011). Opening up learning theory to social theory in research on sport and physical education through a focus on practice. *Physical Education and Sport Pedagogy*, 16, 369-382.
- Lund, O., Ravn, S., & Christensen, M. K. (2014). Jumping together: apprenticeship learning among elite trampolining athletes. *Physical Education and Sport Pedagogy*, 19(4), 383-397. doi:10.1080/17408989.2013.769508
- Martindale, R. J. J., Collins, D., & Abraham, A. (2007). Effective talent development: The elite coach perspective in UK sport. *Journal of Applied Sport Psychology*, 19(2), 187-206.
- Neergaard, H. (2007). *Udvælgelse af cases i kvalitative undersøgelser [Case selection in qualitative investigations]*. Frederiksberg: Samfundslitteratur.
- Peterson, T. (2008). The professionalization of sport in the Scandinavian countries. Retrieved from <http://www.idrottsforum.org/articles/peterson/peterson080220.html>
- Pummell, B., Harwood, C., & Lavallee, D. (2008). Jumping to the next level: A qualitative examination of within-career transition in adolescent event riders. *Psychology of Sport and Exercise*, 9(4), 427-447.
- Ronglan, L. T. (2000). *Gjennom sesongen: en sociologisk studie av det norske kvinnelandslaget i håndball pU og utenfor banen [Through the season: A sociological study of the Norwegian female handball national team on and off court]*. Norges Idrettshøgskole.
- Ronglan, L. T. (2007). Building and communicating collective efficacy: A season-long in-depth study of an elite sport team. *Sport Psychologist*, 21(1), 78-93.
- Ronglan, L. T. (2010). Social interaction in coaching *The Sociology of Sports Coaching* (pp. 151-165): Routledge Taylor & Francis Group.
- Ronglan, L. T. (2011). Social interaction in coaching. In R. L. Jones, P. Potrac, C. Cushion, & L. T. Ronglan (Eds.), *The Sociology of Sport Coaching* (pp. 151-166). Abingdon, Oxon: Routledge.
- Ronglan, L. T. (2012). Norwegian women's handball - organizing for sustainable success. In L. T. R. S.S. Andersen (Ed.), *Nordic elite sport. Same ambitions - different tracks*. Oslo: Universitetsforlaget.
- Ronkainen, N. J., Ryba, T. V., & Selänne, H. (2019). "She is where I'd want to be in my career": Youth athletes' role models and their implications for career and identity construction. *Psychology of Sport and Exercise*, 45, 101562.
- Ryba, T. V., Schinke, R. J., & Tennenbaum, G. (2010). *The cultural turn in sport psychology*. W.V.: Fitness Information Technology.
- Santos, S., Jones, R. L., & Mesquita, I. (2013). Do coaches orchestrate? The working practices of elite Portuguese coaches. *Research Quarterly for Exercise and Sport*, 84, 263-272.
- Savickas, M. L. (2013). Career construction theory and practice. In S. D. Brown, & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 144-180). Hoboken, NJ: Wiley.
- Seanor, M., Schinke, R., Stambulova, N.B., Ross, D., & Kpazai, G. (2017). Cultivating Olympic champions: A trampolining development

- environment from grass roots to podium, *Journal of Sport Psychology in Action*, doi:10.1080/21520704.2017.1327908
- Smith, B. & McGannon, K. R. (2017). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology*, 11(1), 1–21.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks: Sage.
- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3 ed., pp. 443-466). Thousand Oaks, CA: Sage Publications.
- Stambulova, N. (2009). Talent development in sport: The perspective of career transitions. In E. Tsung-Min Hung, R. Lidor, & D. Hackfort (Eds.), *Psychology of sport excellence* (pp. 63-74). Morgantown, WV: Fitness Information Technology.
- Storm, L. K., Henriksen, K., & Christensen, M. K. (2012). Specialization pathways among Danish elite athletes: A look at the developmental model of sport participation from a cultural perspective. *International Journal of Sport Psychology*, 43(3), 199-222.
- Tanggaard, L., & Brinkmann, S. (2010). Interviewet: Samtalen som forskningsmetode [The interview: The conversation as research method]. In S. Brinkmann & L. Tanggaard (Eds.), *Kvalitative metoder. En grundbog [Qualitative methods. A sourcebook]* (pp. 29-55). Copenhagen: Hans Reitzel Publishers.
- Thorpe, H., & Olive, R. (2016). Conducting observations in sport and exercise settings. In B.
- Smith and A. C. Sparkes (Eds.), *Routledge handbook of qualitative research in sport and exercise* (pp.124-138). London, UK: Routledge.
- Wenger, E. (1998). *Communities of practice. Learning Meaning, and identity*. NY: Cambridge University Press.
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7, 225-246.
- Wenger, E., McDermott, R. & Snyder, W. (2002). *Cultivating communities of practice*. Boston: Harvard Business School Press.
- Wylleman, P., & Lavallee, D. (2004). A developmental perspective on transitions faced by athletes. In M. Weiss (Ed.), *Developmental sport and exercise psychology: A life span perspective* (pp. 507-527). Morgantown, West Virginia: Fitness Information Technologies.