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Pupil-athletes' Learning Dispositions and Their Potential Effects in School Sports-situated Talent Development Programs

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Abstract

There is a worldwide increase in efforts to support talents' development toward elite athletes. The focus of the study was the learning processes among athletes that facilitate this development. Drawing on the learning dispositions concept (Carr & Claxton, 2002), the aim was to create knowledge on the prevalence and possible consequences of variability in learning patterns among pupils enrolled in Nationell Idrottsutbildning Fotboll (NIUF)—a highly selective soccer talent development program within upper secondary schools in Sweden. In-depth semi-structured interviews were carried out with a total of 13 pupils in their first or second year of NIUF. The data analysis benefited from iterative movement between the data and key learning dispositions: resilience, reciprocity, and playfulness. The findings show a variation in the strength of these dispositions between pupils, particularly with regard to the reciprocity and playfulness dispositions. We propose that individuals who display a comparably stronger manifestation of learning dispositions are better equipped to benefit from the learning opportunities of such programs. This implies that there is a key role for coaches/educators to play in constructing an environment in which participants may 'learn to learn.'

Keywords: *Learning Dispositions, School Sports, Soccer, Talent Development*

The development of elite athletes is increasingly costly, time consuming, and systematic (Baker, Cobley, Schorer, & Wattie, 2017; Bergeron et al., 2015; De Bosscher, De Knop, Van Bottenburg, & Shibli, 2006; Pankhurst & Collins, 2013). Reflecting this, a growing body of research seeks to understand and support talent systems' capacity to develop talents into elite athletes (e.g., Bailey et al., 2010; Côté & Hancock, 2016; De Bosscher et al., 2006; Henriksen & Stambulova, 2017; Weissensteiner, 2017). Within this broad focus, the talent development literature takes particular interest in developmental and training models. From this research, we know that athlete development is related to, for example, the amount (Ward, Hodges, Starkes, & Williams, 2007; Williams & Hodges, 2005) and quality (Barker, Barker-Ruchti, Rynne, & Lee, 2014; Christensen, Nørgaard, Laursen, & Sørensen, 2011) of practice, as well as the level of enjoyment experienced by athletes (Christensen et al.,

2011; Lund, Ravn, & Christensen, 2014).

Although financial resources, policies, and practice schemes certainly play their part in the success of development systems, there is one process that inevitably must take place in order for talents to progress to successful elite athletes: learning. Empirically, there has been a long-standing focus on the acquisition of particular sports skills (e.g., Williams & Hodges, 2005), and perhaps reflecting a domination of psychological perspectives on talent development, learning often has been conceptualized as 'individual and cognitive processes induced through instructions from the coach' (Christensen et al., 2011, p. 164). However, as a reaction to this somewhat narrow focus, increasing attention now is paid to learning as a social process, where the key determinant of learning outcomes is the interrelation between learner and learning context (Barker-Ruchti, Barker, Rynne, & Lee, 2016; Christensen et al., 2011; Kirk & Kinchin,

2003; Light, 2011).

Although there are nuances between them, conceptualizations of learning as a social process generally share a view of learning as contextually situated (Rovegno, 2006). Studies carried out from this perspective therefore tend to ascribe considerable explanatory value to the specificities of the learning context. In that sense, whereas cognitive approaches have been accused of individualizing and psychologizing what essentially is a social process (Barker et al., 2014; Christensen et al., 2011), social approaches, as noted by Hager and Hodkinson (2009) and Billet (2008, 2009), run the reverse risk of over-structuralizing learning. Put differently, studies that aim to conceptualize and study contextual impacts on learning tend to downplay the importance of individual-level variation in the learning processes that take place within a particular context. Whereas previous research has been characterized by either a context or individual understanding of learning in talent development systems, we seek to strike a balance between these two types of explanations.

The learning context in focus here is Nationell Idrottsutbildning Fotboll (NIUF), a Swedish football (soccer) talent development program that, together with equivalent programs for some 50 other sports, is embedded in the Swedish public upper secondary school sports system (years 10-12, ages 16-18). School sport programs generally are perceived to be 'top of the line' learning environments and a cornerstone in talent development systems in several countries (Radtke & Coalter, 2007), including Sweden (Fahlström, Gerrevall, Glemne, & Linnér, 2015; Sjöblom & Fahlén, 2010). The same goes for NIUF, which holds a strong position as a targeted environment for individuals marked as football talents in Sweden (Peterson, 2011).

Previous research suggests that talent groups are homogeneous in many respects (Christensen, 2009; Ferry & Lund, 2018; Kilger & Börjesson, 2015; Lund & Söderström, 2017), and two aspects in particular

indicate that this applies to the group of pupils admitted to NIUF, too. First, prior to entering NIUF, all pupils in the program go through the same football development system—the club activities governed by the Swedish Football Association (SvFF). Second, compared to the Swedish education system in general, all school sports talent programs, including NIUF, are highly selective; only pupils deemed to meet the high entry criteria of the program are admitted. NIUF pupils are selected through collaborative processes between SvFF and school representatives (Lund & Liljeholm, 2012). In addition to the academic merits required, only players that are likely to develop into national-level elite athletes are admitted to the program (Lund & Liljeholm, 2012; Riksidrottsförbundet, 2012; Skolverket, n.d.). This usually means that a player needs to be among the 16 best male or female players in one of the 24 football districts that make up the talent system as a whole, or meet the standards of those 16 best regional players (Peterson, 2011; Lund & Söderström, 2017). However, regardless of the highly selective processes preceding admittance to the program, not all NIUF pupils move on to become successful elite athletes. This indicates that—among other variables of course—there is a variation in pupils' ability to benefit from the learning opportunities afforded in NIUF.

Against the above described background, this paper seeks to give some learning-focused answers to why it is that a seemingly homogenous group of pupil-athletes, undergoing the same program in the same talent development environment, display individual-level variation in learning patterns and outcomes. More specifically, the purpose of this study is to create knowledge on the prevalence and possible consequences of variation in learning patterns among individuals in NIUF.

In order to enable an analysis of learning as a process of which the workings and effects potentially vary between learners, we draw on the concept of learning dispositions. Learning dispositions denote

individuals' techniques, beliefs, and references that relate to learning in a particular context (Carr & Claxton, 2002; Claxton & Carr, 2004; Colley, James, Diment, & Tedder, 2003; Deakin Crick & Yu, 2008; Griffiths & Armour, 2013; Hodkinson & Hodkinson, 2004; Sisjord & Sørensen, 2018). Learning dispositions thus reflect an individuals' readiness, ability, and willingness to engage in learning opportunities, and the concept therefore also helps us analyse learning from the perspective of the individual learner (c.f., Weissensteiner, 2015).

The empirical setting at hand, together with our theoretical points of departure, leads us to address two research questions (RQs). First, which learning dispositions are manifested among NIUF pupils, and, second, is there a variation in the degree of manifestation of dispositions among NIUF pupils? With regard to our first RQ, previous research on learning in talent development, although building on other points of departure than those applied here, indicates aspects of importance for expertise development in sport. Of particular relevance are studies showing that successful athletes share learning experiences, take responsibility for their development, and have the ability to work hard (Barker et al., 2014; Christensen et al., 2011; Larsen, Alfermann, Henriksen, & Christensen, 2013). Interpreted from the conceptual point of view used here, these insights resonate with the key learning dispositions that Carr and Claxton (2002) identified: resilience, reciprocity, and playfulness. Because they are central to our ensuing analysis, a brief explanation of these dispositions is apt. According to Carr and Claxton (2002), resilience denotes the ability to recover from setbacks and to pursue a learning endeavour despite temporary confusion and frustration. Reciprocity signifies the use of self and others as resources in collaborative learning processes (c.f., Christensen et al., 2011; Larsen et al., 2013). Playfulness, Carr and Claxton's (2002) third key learning disposition, implies being mindful, imaginative, and experimental. As such, playfulness resembles what Deakin Crick and Yu (2008) referred to as linking

new learning to what one already knows, the ability to see potential novel aspects in learning situations (see also Barker et al., 2014).

The research questions are as follows:

RQ1: What is the bundle of learning dispositions that structure the NIUF pupils' learning patterns?

RQ2: Is there a variation in the degree of manifestation of dispositions among these NIUF pupils?

Importantly, although previously unaddressed in the context of talent development, this question is validated by studies from other contexts that drew on the concept of learning dispositions and indeed showed how learners interpret and react to the same learning situation in different ways (Bloomer & Hodkinson, 2000; Griffiths & Armour, 2013; Hodkinson & Hodkinson, 2004).

Context, Materials, and Method

This study draws on data from a larger project that, based on an understanding of NIUF as a learning culture (Hodkins, Biesta, & James, 2007), examines school sports teaching and learning activities aimed at expertise development. In addition to the questions examined in this article, the larger project explores the characteristics of NIUF as a learning context, its impact on athletes' learning and development, and how NIUF can be understood within the broader framework of Swedish football talent development.

The research site for the broader project is one out of approximately 70 local instantiations of NIUF. As is typical for NIUFs, the education is offered in combination with approximately five 'non-sport' upper secondary school programs. Teaching is gender-mixed, and the bulk of NIUF activities consists of theoretical (e.g., mental training) and practical lessons (e.g., football exercises). While attending NIUF, pupils are expected to play for their club teams, and therefore there is no formal team associated with the NIUF (for an in-depth description of Swedish school sport see Ferry & Lund, 2018). By definition, NIUF

focuses on individual development, for example, technical skills and tactical understandings related to specific playing positions. Like most other NIUFs, the one under study admits up to 20 pupils each year, and because the program runs over three years, at any given time there are 40-60 pupils aged 16-18 in this NIUF. This number varies depending on how many applicants are deemed to meet the entry criteria (see Introduction).

The broader project takes an ethnographic approach, and gaining full access therefore was key. In order to negotiate access (Hammersley & Atkinson, 2007), the first author met with the two main NIUF teacher-coaches and the three principals of the school in which the NIUF in question was located. During this meeting, the overall design and practical and research ethical aspects of the project were explained and discussed. Fortunately, all actors invited to the meeting were in favour of participating, and access therefore was granted. The ethnographic approach included interviews with pupil-athletes and teacher-coaches. In order to address the purpose of this specific study, the pupil-athlete interviews were particularly focused on pupils' individual understanding of their learning processes and activities.

Data Collection

To analyse which learning dispositions manifest among NIUF pupils (RQ1) and the variation in the degree of manifestation of these dispositions among these pupils (RQ2), the paper builds on interview data from the larger research project described in the preceding. Interviews were chosen because they can prompt descriptions of individuals' actions in learning situations as well as of the meaning-making related to these actions and the learning context more broadly (c.f., Kvale & Brinkmann, 2009).

At the time of data collection, in total, 29 pupils (16 boys and 13 girls) were in years 10 (age 16) and 11 (age 17) in this particular NIUF program. Per written and oral communication, all 29 were asked to be interviewed for the study. Thirteen pupils (sev-

en boys and six girls) agreed to participate. Because the project runs over several years and we wanted to be able to follow the same cohort for the duration of the study, pupils from years 10 (NIUF year 1) and 11 (NIUF year 2), but not 12, were asked to participate. The participants' age and which school year and NIUF year they were in at the time of interviews are detailed in Table 1 in alphabetical order.

Table 1

Overview of participant characteristics

Pseudonym	Age	School year	NIUF year
Alma	17	11	2
Daniel	17	11	2
David	17	11	2
Elin	16	10	1
Frida	17	11	2
Jessica	16	10	1
Jonte	17	11	2
Ludvig	16	10	1
Mats	16	10	1
Sophia	16	10	1
Sophie	16	10	1
Stefan	17	11	2
Victor	16	10	1

The semi-structured interviews utilized an interview guide designed to prompt descriptions of the characteristics of the various situations at NIUF to which pupils ascribe learning; their content, structure, and pupils' and teachers' actions in these situations; and the meaning-making related to these actions.

The interview questions were:

1. How does NIUF fit with you overall football career goals?
2. What are your learning goals for NIUF?
3. Are the things you learn at NIUF applicable to and relevant for your club performance, and if so, how?
4. Could you describe situations in which you feel

that you learn something?

5. What makes a football lesson good from a learning perspective?
6. What do teachers and other NIUF pupils do that contribute to learning?
7. How do you know that you've learnt something?
8. What do you have to do to learn?

The pupils were given the opportunity to choose the interview time and location and whether they wished to be interviewed separately or together with one of their NIUF classmates. This led to four pair and five individual interviews, all carried out by the first author at the school facilities. Interviews lasted 45-75 minutes and were audio-recorded and transcribed verbatim, and the names of all interviewees were replaced with pseudonyms. Following Kvale and Brinkmann's (2009) quality criteria for interviews, summaries and follow-ups were used to clarify and verify descriptions and interpretations of interviewees' actions and meaning-making.

Because the study involves young people, we were diligent in our consideration and *explanation* of research ethics throughout the study (e.g., Swedish Research Council, 2017). This meant an extra thorough explication of common ethical standards, including repeatedly informing participants of the purpose of the project, the *meaning* of and right to anonymity, and the ability to discontinue participation at any time (including after the interview). In addition, even though the pupils were the ones making the final decision, they were encouraged to discuss participation with their guardian(s).

Data Analysis

The analysis was carried out in three steps that all relied on the comparing/contrasting technique (Charmaz, 2014; Miles & Huberman, 1994). First, to allow for an overview of the (dis)similarities in the pupils' descriptions of learning, the data were sorted according to the general themes addressed during the interviews (e.g., learning goals and situations in

which pupils feel like they learn). This step revealed that although pupils' descriptions fall under the same themes, there are distinct differences between pupils *within* these themes. For example, all pupils talked about 'relevant' content as a marker for a situation with good learning potential, but the meaning of relevance varied greatly between the pupils. In the second step, we utilized the learning disposition concept as an analytical scheme (Miles and Huberman, 1994) in order to further enhance the outer contours and nuances of the overall themes. An iterative movement between this concept, the learning dispositions identified by Carr and Claxton (2002), and the data unveiled the correspondence between themes and Carr and Claxton's three key learning dispositions: resilience, reciprocity, and playfulness. To validate this correspondence, a range of empirical markers for each learning disposition (i.e., the constituent elements of these dispositions in the context of NIUF) were distilled, and these are displayed in Table 2.

Table 2

Empirical markers for the resilience, reciprocity, and playfulness dispositions

Disposition	Empirical markers
Resilience	Intentionally seeks challenging learning situations
	Focuses on addressing weaknesses although it may involve both frustration and critique
	Handles the frustration that arises from a discrepancy between lesson content and the skills and abilities perceived to be in need of development
Reciprocity	Acknowledges other pupils' roles in creating the learning environment
	Acknowledges their own responsibility toward other pupils' learning
	Engages in learning-focused dialogues with the teacher coach in order to promote deep learning
Playfulness	Engages in meaning-making that allows transferability of knowledge, skills, and abilities to other football contexts
	Is creative and imaginative in their understanding of learning situations

This aspect was crucial for the third and final step of the analysis, which involved validating if and how the manifestation of the three dispositions varied between the pupils. To do this, we applied the analytical scheme developed in the second step in a reanalysis of each pupil's statements. We were then able to distinguish between pupils for whom a particular disposition was, following Claxton and Carr's (2004) thinking, strong or weak in its manifestation. Pupils who exhibited all markers were here determined as stronger in their manifestation of that disposition, compared to pupils that exhibited one of the markers.

Results

Resilience

Resilience denotes the ability to recover from setbacks and to persist in learning situations despite temporary confusion and frustration. As such, resilience reflects risk-taking during learning processes, as well as the capability to view failures as a reflection of risk-taking rather than a lack of ability (Carr & Claxton, 2002). Resilience is thus a disposition that helps pupils mediate between their understanding of learning situations as challenging and their continued engagement in those situations. For the pupils in this study, these abilities are fundamental for the learning considered necessary to develop into an elite football player. As a reflection of this, pupils reported applying to NIUF because they believed the program offered a challenging learning environment, much due to NIUF's highly educated and experienced teachers and the skills-based selection processes that precede admittance to the program. As illustrated by Jonte, "You know that at NIUF everyone wants to pursue a football career, that's why we're here."

Another indicator of the importance of resilience among pupils in the study is that they actively seek out what they consider to be challenging learning environments outside NIUF. For example, in addition to being part of a club-based elite U19 team, most pupils have opted to play on a senior sub-elite team. The rationale provided for this is that such teams have players they can learn from because they are stronger, faster, and more skilled than the NIUF pupils. This reflects the view that it is "better to be the worst than the best, because it

gives something to direct your learning and development towards” (Victor). All pupils furthermore recognized the need to focus learning toward their weaknesses as football players. As an element of this, they consider it important to embrace negative feedback and to “transform critique into motivating input” (Alma). Similarly, for all pupils, “taking setbacks and dealing with them the right way” (Daniel) is an integral part of what it means to develop as a football player. Stefan said, “You can’t get stuck on your mistakes. You just need to bounce back and go at it again, don’t give up just because things are going bad for you.” Along the same lines, Frida stated, “I usually tell myself I ‘need to do better than this,’ because I know I can be better, and then I just do it.” Because all pupils are part of a football club, they reported some tensions between the learning processes in the club and those they take part in at NIUF. One example of this is the conceived difficulty of relating to ‘new’ and unfamiliar learning elements, such as receiving or passing a ball using a certain technique. At times, these tensions create both confusion and frustration in the NIUF environment. However, in line with the meaning of a resilience disposition, all except two pupils handle this by simply *persisting*. As Jonte explained, “Learning these new ways of doing things takes lots of repetition and the teacher goes ‘Stooooop, go back and do it correctly!’ and it’s sometimes frustrating, but it’s doable.”

Although they shared most other resilience markers, for two pupils the resilience disposition was less manifest. These two pupils described how they become impatient when they are faced with what they conceive as irrelevant theoretical content or less match-like exercises, and they get frustrated when the teacher or other pupils are too focused on details. In the words of Ludvig, “I mean, we talk for like two minutes and play for like 90 seconds, that’s too little [practice].”

Reciprocity

Whereas resilience relates to challenging learning

situations, reciprocity signifies pupils’ approach to others (e.g., fellow pupils and teachers) as resources in their own learning, as well as to their own role in others’ learning. As stated by Sophie in her reflection on volley shot practice, “If one pupil is having a bad day, you don’t get a good pass and then that other pupil will also have a bad day.” Reciprocity, as the preceding quote illustrates, thus involves both receptive and expressive elements (Carr & Claxton, 2002). In the context of NIUF, the significance of reciprocity is evident in several ways. First, pupils highlighted the importance of other students’ behaviour in constructing a group climate that promotes or hinders learning. For example, interviewees talked about how other students vary in their ability to contribute to the successful accomplishment of an exercise, and in how they signal other pupils’ performance (e.g., encouraging or discouraging).

What for the interviewees constitutes a promoting group climate in turn takes on two meanings. Stefan, by saying that “Friday morning [lessons] sometimes lack in quality because almost everyone is a bit tired,” illustrated one of them: the group’s collective ability to create and maintain high intensity during lessons. Thus, in addition to being considered a crucial game-related quality of a good football player, fellow students’ contribution to high-tempo practice sessions is conceived as conducive to learning. The other aspect of a good learning climate is when the group experiences a social environment in which pupils feel comfortable with and encouraged to have a go at tasks that are at or over the limit of their current ability, and to do so without the risk of receiving negative feedback in the event of failure. Elin described this situation as follows:

I think [learning] is very related to the group. I mean, if we’re doing an exercise and you’re in a group where you dare to fail, where no one gets angry if you do (...) then that exercise will be rewarding and you will do better than if you’re in a group where people, like, don’t support you. Then you won’t improve either.

Four of the pupils in the study only acknowledged the significance of other pupils' behaviour in creating a beneficial (or less so) learning environment. In comparison, the remaining pupils also felt they themselves have a responsibility for other students' learning. From this follows attention and sensitivity toward other pupils' learning needs and attempts to act in a way that is attuned to these needs. As an illustration, Frida stated the following:

It was difficult practicing with new people in the beginning [at NIUF], because you didn't know their strengths and weaknesses. We've practiced together for two years, so now it's a lot easier, but in the beginning you had no clue how to for example pass the ball to them, how and where they'd like to receive a pass. But I've sort of learned that now.

In addition, these pupils' comparatively stronger manifestation of a reciprocity disposition is indicated by the high value they place on teachers' feedback and the initiatives they take to interact with their teachers. Daniel described his reason for initiating conversations with teachers:

If you've done a complicated [match-related] exercise and you discuss it with the teacher afterwards, asking like, 'How could I solve a situation like that one?', and when you through that dialogue are able to come up with a solution (...) that's when I feel like I've learnt something.

The preceding quote illustrates how the group of pupils among which the reciprocity disposition is comparatively stronger in its manifestation actively seek out teachers to discuss specific aspects of, for example, an exercise, and they do so in order to understand or clarify both the initial teacher feedback and the reasons underpinning it.

Playfulness

Deakin Crick and Yu (2008) claimed that "effective learners are on the lookout for links between what they are learning and what they already know" (p. 391). In the parlance of Carr and Claxton (2002),

effective learners are more mindful, imaginative, and creative. They can look at things "in different ways" and "imagine new possibilities" (Deakin Crick & Yu, 2008, p. 391). The disposition playfulness thus reflects an ability that allows learners to see potential novel aspects in learning situations.

Among the pupils in this study, the playfulness disposition is reflected in the ability to recognize and create meaning around the transferability of the learning that takes place at NIUF to situations outside NIUF where this learning may be useful. There is a clear distinction between the pupils with regard to how strongly this disposition is manifested. In particular, whereas all pupils take their point of departure in their team positions (e.g., defender or forward) when they describe the transferability of NIUF learnings, it is evident from the interviews that pupils' ability to engage in such meaning-making varies. The five pupils that are comparatively weak in this regard are heavily oriented toward the demands, especially strategic demands, placed on them in their current club football contexts. Elin's description of her goal-setting illustrates this:

[When I set my goals for NIUF] I thought a lot about what is needed to be able to play in the [club's] senior team, the things that my club demands that I practice at. (...) I'm a winger, so crosses are pretty central.

Because of their club focus, these pupils are unable to find value in the NIUF exercises they consider to be irrelevant in relation to their performance on the position that they hold in their current club. In the words of Jonte, "You may have learned a really good way of playing [defense for example], but you can't bring it back to the club, because it's not used there." Some also struggle with theoretical content in this regard. Ludvig, for example, stated, "I don't think that anatomy and stuff like that is... I see that as an additional content basically, I don't think it's super important. It's practicing football that makes you a better football player." In contrast, the pupils whose

manifestation of the playfulness (meaning-making) disposition is strong described how they are able to make most lesson content seem relevant. Along these lines, Sophie stated the following:

[In my club team, we] use a pressing tactic outwards on the field, and the [NIUF] teachers sometimes want us to practice to press it inwards, but I mean, you just flip it around, and then it's applicable, so there's always useful learning [to bring back to the club].

Similarly, Alma illustrated how all NIUF lesson content is meaningful because you may “face a team that plays in a certain way, and then it's good to know that game strategy.” This group of pupils also display the ability to construct relevance in an ongoing exercise by understanding (i.e., imagining) it as a representation of something beyond the obvious, thereby making “everything useful” (Stefan). These pupils furthermore are distinguished by their ability to create meaning around why a drill is to be carried out in a certain, less match-like way, and how it might be relevant to their individual development as football players. Stefan, for example, said the following:

A passing exercise is of course sometimes better than just playing, because when we play [more match-like], I don't make that many passes. But if Daniel and I pass the ball back and forth, I get to do lots of passes. So the drills are better [for developing passing skills].

Discussion

Key Learning Dispositions in Talent Development Contexts

Based on the assumption that learning dispositions affect individuals' learning patterns and, by extension, learning outcomes (Carr & Claxton, 2002), our first RQ asked which learning dispositions are manifested among pupils in NIUF as a learning context. With regard to this question, the learning experiences and activities described by the pupils in our study correspond with what Carr and Claxton (2002) suggested

are key learning dispositions: resilience, reciprocity, and playfulness. Together with the resonance that these dispositions find in previous research on athlete/talent development (Barker et al., 2014; Christensen et al., 2011; Larsen et al., 2013), this finding suggests a certain consistency across talent development learning contexts. Previous research may thus be right in proposing that talent identification and selection processes promote certain skills and personalities, in turn creating, in some respects, homogenous talent groups (Christensen, 2009; Ferry & Lund, 2018; Kilger & Börjesson, 2015; Lund & Söderström, 2017).

Regarding resilience in particular, our findings echo scholars who note that being persistent and committed to high volumes of practice are key selection indicators for coaches and talent scouts (Christensen, 2009; Lund & Söderström, 2017; see also Sæther, 2014). The reciprocity disposition manifested among the students in our study similarly resonates with previous research that highlights how successful athletes learn through communication with other athletes (Christensen et al., 2011; Henriksen, 2010; Larsen et al., 2013) and how social and communication skills play a part in team and talent program selection processes (Johansson & Fahlén, 2017; Kilger & Jonsson, 2017). What we term playfulness also may have some generalizability across sports contexts, although its empirical markers are less discussed in the sports literature. A notable exception and apt illustration comes from Griffiths and Armour (2013), who in their study of volunteer coaches' learning behaviour showed that intentionality (inquisitiveness, attentiveness, and open-mindedness) mediates coaches' motivation and engagement in future coach education. At a more general level, Barker et al. (2014) showed that being able to identify and pursue new ways of manoeuvring one's sport involvement is important for elite athlete development. This lends support to the argument that playfulness, along with resilience and reciprocity, is a significant learning disposition in talent development contexts.

Individual-level variation in the degree of manifestations of learning dispositions

Even though the study participants have similar sporting backgrounds and have gone through a thorough selection process, our study shows a variation in the degree to which learning dispositions are manifest among them. This means that individuals in an otherwise homogenous group vary in the degree to which they are ready, willing, and able to engage in particular practices. This is a key finding because it implies that individuals who have undergone a thorough selection process, and who share the same learning environment, still display different learning patterns.

We found most variation in the manifestations of reciprocity and playfulness. According to Christensen and colleagues (2011), learning together with and from others is the essence of team practices such as football, and this is reflected in all pupils' acknowledgement of others as a learning resource. However, engaging in learning-focused dialogues with the teacher coaches did not come naturally to some of the pupils. The pupils that do engage in such dialogues reported they generate a deeper understanding of certain aspects of learning situations. Pupils that fail to initiate dialogue may therefore be unable to gain such a deeper understanding. From a collaborative learning standpoint, it also is notable that the pupils relatively weak in their manifestation of the reciprocity disposition scarcely consider other pupils' learning needs. Precisely because learning together is essential to team practice, such practices also depend on participants' ability to contribute to a collaborative learning environment. The pupils that are comparably weaker from a reciprocity standpoint arguably are less able to do so (Rogoff, 2003).

Regarding variation in the manifestation of playfulness, researchers have claimed that an understanding of learning activities as relevant directs interest and raises motivation (Billet, 2009; Carr & Claxton, 2002; Hodkinson & Hodkinson, 2004). In line with this, the pupils that show a weaker manifestation of

this disposition are unable to direct interest toward, and find motivation in, lesson content they see as irrelevant for the performance of their playing position in their current club. Arguably, this makes these players less adaptable to changes in, for example, coaching styles and tactical frameworks in their current club. However, because learning dispositions signify the ability to learn, a weaker manifestation of the playfulness disposition also may be disadvantageous for these pupils' long-term development as football players.

Implications for Practitioners and Concluding Remarks

The aim of this study was to create knowledge on the prevalence and possible consequences of variation in learning patterns among individuals in a highly selective learning context. In pursuit of this aim, we first identified three learning dispositions among pupils in NIUF: resilience, reciprocity, and playfulness. As they may be gleaned from previous literature on this topic, these dispositions appear to be somewhat consistent across contexts. We thereafter showed a variation in the degree to which dispositions are manifest between individuals in the same NIUF learning environment, especially with regard to reciprocity and playfulness.

Our findings have several implications for talent development practitioners. At the most general level, our findings indicate that learning environments need to have a more fine-tuned design that accommodates variation in learning dispositions (c.f., Griffiths & Armour, 2013). More specifically, our contribution highlights the key role that educators (e.g., coaches and teachers) may play in enhancing learning in talent development environments. Educators that are able to identify learning dispositions and their degree of manifestation are better equipped to support individuals based on their individual learning patterns, for example through adjustments in key didactical elements such as content and delivery. However, even more important is perhaps this ability for educators to construct a learning environment that supports participants' development of key learning dispositions (i.e.,

learning how to learn), and indeed their development toward both excellent athletes and well-functioning human beings (Miller & Kerr, 2002). Because coaches/educators dictate group climate (c.f., Cushion & Jones, 2006), they may, for example, deliberately attempt to foster the collaborative learning and communication skills that are key aspects of the reciprocity disposition. Similarly, an awareness of the importance of playfulness can help educators construct a learning environment that supports participants' development of the ability to construct content as relevant, thereby directing interest and increasing motivation and engagement (Billet, 2009; Carr & Claxton, 2002; Hodkinson & Hodkinson, 2004).

To close, our study shows that learning dispositions is a useful conceptual tool in the exploration of learning processes as contextually situated yet individually variable. However, as Bloomer and Hodkinson (2000), Griffiths and Armour (2013), and Hager and Hodkinson (2009) pointed out, individuals' learning takes place in multiple learning milieus consecutively over the life course and through simultaneous engagement in, for example, both a club and a talent development program, as was the case for the pupils in this study. With respect to the former, our study is limited in that it does not take into account that although pupils like those at NIUF are homogenous in some respects (e.g., highly selected and with a similar sporting background), their 'personal histories' (Billet, 2009, p. 12) may differ in other ways that potentially are impactful for the shaping of their learning dispositions. Regarding the latter, another limitation of our study is that it does not take into account the impact that engagement in multiple contexts has on pupils' formation and manifestation of learning dispositions. On their own, both these aspects are fruitful topics for future studies that seek to understand the relationship between learning dispositions and learning patterns among participants in talent development milieus.

In this study, we sought to strike a balance between context- and individual-focused explanations of

learning patterns and outcomes. Although the learning dispositions concept served us well, the approach used by necessity limited our scope and, consequently, our findings' explanatory potential. Given the practical implications of our study, a final suggestion for future studies on talent development is a research design that combines the learning disposition concept with a concept or concepts that focus on the role played by coaches/educators in constructing an environment in which participants may 'learn to learn.' Claxton and Carr's (2004) ideas around elements of such a 'learning curriculum' may prove particularly useful in this regard. Ideally, such a research design would be longitudinal and focus empirically and analytically on both pupil-athletes and coaches/educators, thereby allowing the researcher to tease out the extent to which dispositions and their transformations depend on the talent development context's 'learning curriculum,' participants' personal histories, and their engagement in multiple learning contexts.

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