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Scaffolding athlete learning in preparation for competition: what matters

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ABSTRACT

The purpose of this study is to advance the notion of scaffolding in coaching as a socio-pedagogic activity through exploring the "doing" of coaching during a competition preparation period. Using the method of critical companionship, the analysis draws on a storied representation of a coach's practice. Findings conceptualise scaffolding as a transformative process of continuous building and enacting of both coach and athlete's agentic capabilities to enhance learning. Within this framework, the coach had to understand the athlete and read the cultural context for scaffolding to occur within an appropriately constructed zone of proximal development (ZPD). This involved building a ZPD and scaffolding that developed athlete agency as a learner while maintaining respect and security, leading to the enhancement of the coach's pedagogical and social agency. These findings advance the notion of scaffolding through merging the pedagogical and social, providing a framework for coach and athlete's agentic learning and development.

Introduction

Recent portrayals of sports coaching have depicted it as a contested activity, grounded in numerous relational networks, with actors constantly engaged in negotiation and exchange (Crossley, 2015; Jones, Edwards, & Viotto Filho, 2016). It is a perspective that positions coaching as an inherently human endeavour, enacted at the socio-pedagogical interface (Jones, Thomas, Nunes, & Viotto Filho, 2018) with the purpose of cultivating relationships to support both coach and athlete learning. To afford some order to this complex process, the concept of scaffolding provides a means through which both related structure and agency can be realised (Jones & Thomas, 2015). Scaffolding, in this instance, is considered a pedagogically

focused, fluid framework shaped by context, whereby coaches' actions are simultaneously directive and contingent upon emergent performance (Jones & Thomas, 2015).

Despite its increasing adoption within the coaching literature (e.g., Thomas & Wilson, 2014; Vinson & Parker, 2019), scaffolding's use has generally remained at the level of rhetoric (Jones & Thomas, 2015). Indeed, there has been limited direct empirical research conducted to support or refute scaffolding as a sense-making lens and/or progressive framework for enhancing agentic learning and development. This non-figurative use has led to claims that its significance is unclear (Pea, 2004). Consequently, despite resonance within the coaching community, the conceptualisation of coaching as "scaffolded practice" remains immature.

In response, the purpose of this study is to advance the notion of scaffolding in coaching as a socio-pedagogic activity. The intentionality of a coach's scaffolding practice over a twelve-month competition preparation period will be considered, through developing insight into the "doing" of coaching. The research objectives are related to exploring a coach's perceptions of: (1) the scaffolding approach utilised in preparing a gymnast for a target competition; (2) the scaffolding applied to support a gymnast's security and insecurity within the learning process; and, (3) the contextual and relational factors that influenced and underpinned the coach's scaffolding practice.

The principal significance of the work lies in presenting the metaphor of scaffolding as a workable progressive socio-pedagogical notion within the contested world of coaching (Jones & Thomas, 2015). Its worth lies in further developing a framework that resonates with coaches (and coach educators) through better ascertaining the "just whatness" of coaching as related to scaffolded practice (Jones & Ronglan, 2018; Jones & Thomas, 2015). The case advances the importance of socio-pedagogically theorising sports coaching emphasising that the heart of coaching lies in the everyday teaching and learning interface (e.g. Jones, 2007) and not psychological reduction (e.g., Duda, 2013; Jowett, 2009) or decontextualised models of action (e.g., Robinson, 2014). The core lies in scaffolding agentic coaching practice through enlightened directed relational sensitivity (e.g. Jones & Hemmestad, 2019). Finally, the value of the work lies in enhancing the historical, unfolding nature of coaching practice. In doing so, coaching is founded in an interplay between the interaction order (i.e. pedagogical) and the social order (Goffman, 1983). The prominence of the social and pedagogical contextualises coaching practice which may help coaches better deal with the everyday complexities of improving athletes' performances and development.

Cultural-historical perspective of coaching practice

From a cultural-historical perspective, scaffolding is considered a process of guided mediation of an individual/s alongside a more capable other, with the aim of achieving learning outcomes and internalising knowledge (Vygotsky, 1978). Here, scaffolding develops an individuals' agency to propel learning forward through recognising and responding to tasks with increasing competence, while repositioning themselves within a knowledge domain (Engeness, 2020). This, for example, can involve developing conceptual insights into the tactical construction of a gymnastics' routine, providing new possibilities for action through seeing the familiar in a different way (Edwards, 2017). Although the origins of the scaffolding metaphor is found in the work of Lev Vygotsky, Nikolai Bernstein and Alexander Luria (Shvarts & Bakker, 2019), the term was first introduced empirically by Wood, Bruner, and Ross (1976). In their work scaffolding is understood as support given by a teacher to a student when performing a task to accomplish what they cannot do alone. Despite its limited application in sports coaching research, scaffolding has been the focus of recent educational studies on teaching within small groups (Van De Pol, Mercer, & Volman, 2018), whole-classrooms (Smit, van Eerde, & Bakker, 2013) and within a physical education setting (Chen, Rovegno, Cone, & Cone, 2012). Here, scaffolding that supports learning occurs by offering contingent (or adaptive) support, fading support over time, and developing the agentic capability of the learner (Van De Pol et al., 2018).

In sport coaching, scaffolding aims to construct order within the often insecure, sometimes shapeless, process of athlete learning (Jones & Thomas, 2015; Santos, Jones, & Mesquita, 2013). The purpose is to support the learner/s within their "zone(s) of proximal development" (ZPD); a space where learning occurs with a more capable other (Vygotsky, 1978). Such a conceptualisation frames a coach's role as mediator of learning, using scaffolds to adapt and help athletes enter and move forward in their ZPD, thereby unlocking learning and development that would have otherwise been impossible (Vygotsky, 1978). Importantly, scaffolding occurs simultaneously through consideration of the macro, meso and micro levels, and facilitating a semblance of coherence within the pedagogic approach (Jones & Thomas, 2015).

At the macro level, organisation of the physical and cultural context is prominent where, for example, focus is given to the general planning process or overall sequencing of tasks (Engin, 2014). Such activities, however, do not take place in a social vacuum; rather, construction occurs within a specific gatekeeping discourse (Edwards, 2017). Intersubjectivity plays a prominent role; whereby a shared understanding of aims and context supports cooperative thinking and reflection on action(s) (Jones & Thomas,

2015). In this way, macro scaffolding acts as "cause and compass" (Kretchmar, 1994) for meso and micro levels of methods and strategies which bring the abstract into the concrete (Jones & Thomas, 2015). For example, a coach who perceives good performance as related to the players' ability to make good decisions within the complexity of play; is more likely to engage in activities at the meso level that simulate unpredictability and uncertainty prominent during game situations (Santos et al., 2013).

Scaffolding at the meso and micro levels is both initiatory and contingent (Jones & Thomas, 2015). Through setting specific learning objectives and engaging in iterative planning at the meso level, the coach can react and respond according to micro contextual developments (Jones & Ronglan, 2018). This involves the notion of "noticing" (observing) (Jones, Bailey, & Thompson, 2013) and dynamic assessment of learning within the activity (Lajoie, 2005) to assess the appropriateness of an athletes' ZPD and provide necessary scaffolded support (Jones & Thomas, 2015). The essence of this type of assessment is that coaches create a series of common challenging exercises and adapt the difficulty to ensure athletes develop agency to discover an appropriate solution (Jones & Ronglan, 2018). For scaffolding to occur contingent activity within an adequately designed ZPD, would seem to be crucial (e.g. through asking challenging questions, providing feedback, giving hints, explaining and modelling) to ensure the development of athlete learning and understanding (Van De Pol et al., 2018).

Fading of scaffolding at the micro level is necessary to develop the agentic capability of the athlete to respond effectively to emerging challenges (Van De Pol et al., 2018). As well as the what and how of coaching practice the micro emphasis also includes the agency of the coach and how they present themselves to obtain athletes' engagement and compliance (Jones, Bailey, Santos, & Edwards, 2012). By engaging with the macro, meso and micro perspectives, this study, therefore, will aim to advance the notion of scaffolding in coaching as a socio-pedagogic activity.

Methodology

The method utilised within the project involved dialogical reflection on personal practice, a process underpinned by the notion of "critical companionship" (Titchen & McGinley, 2003). This is a collaborative endeavour for the purpose of knowledge clarification and generation through critiquing self and peer practice. The precise method of data generation involved active interviews (Gubrium & Holstein, 2012), and critical reflective discussions in and on those conversations between the lead author and Jake (second author). Hence, the deliberative semi-structured "interviews" were considered social encounters comprising of concerted analytical reflection and active collaborative construction of knowledge (Gubrium & Holstein,

2012). The dialogical reflections meanwhile included judicious discussions amongst the authors on the resultant interviews and discussions. These were loosely framed by the concern to re-theorise scaffolding as a socio-pedagogical act and extend it by considering the agentic perspectives of the coach and athlete engaged in the learning process (Zeichner & Liston, 1996).

Participants and context

The topic explored centred around Jake's coaching, with the first author's role, borrowing from Gubrium and Holstenin (2012), resembling that of lead inquirer. In terms of individual and contextual disclosure, both Jake and the lead author have worked together within academia and between them have over 30 years of coaching experience. As academic colleagues, they have collaboratively developed and delivered undergraduate and postgraduate sports coaching curriculums over a six-year period. Their breadth of experiences ranges from coaching international athletes, semi-professional clubs, age grade and student teams. The third author contributed to the analysis of data and to outlining the findings.

The coaching context in this study is a competition trampoline-gymnastics group that Jake coached over a period of several years. The focus is specifically on one participant, Sara (a pseudonym), with whom he had worked for a long period of time and had attained notable competitive successes. Over the one-year period of study Sara was preparing for a target competition and was coached by Jake from Monday to Friday, while experiencing additional sports science and, strength and conditioning support. It was Jake's observations of Sara's actions as a response to his scaffolding and not her own perceptions that were crucial for the research objectives. How he analysed her repositioning in relation to the new scaffolding situation (i. e. how she acted) was imperative and not her verbal explanations. This is not to reduce the importance of Sara's perspective; she has read drafts of this paper and has expressed openness to the idea of engagement in further research.

To produce the depth and perceptiveness of data required, it was necessary that the interactions between authors were active and critically reflexive. In so doing, we guarded against a simplistic or overtly functional "merging" of our differing interpretations (Allen-Collinson, 2012). Consequently, the process of reflexivity engaged in was done both as mutual collaboration (i.e., a collaborative and participatory dialogue) and intersubjective understanding (i.e., focusing on the contested and negotiated accounts produced; Finlay, 2002). Here, a conscious effort was made to critically consider and challenge preconceptions as researchers while capturing Jake's narrative of "being" in the world (Allen-Collinson, 2012). Following approval by the university's ethics committee, minimum

requirements were transcended by placing emphasis on dignity, care and connectedness between ourselves as researchers (Sparkes & Smith, 2014). Information revealing characters, locations and identities, therefore, have been removed and pseudonyms used to preserve the participants' integrity where agreed.

Procedure and method

The origin of this study can be traced to the initial conceptualisation of scaffolding (i.e. Jones & Thomas, 2015) and subsequent critical conversations between lead author and Jake during the creation, preparation and implementation of an undergraduate sport coaching module. During this two-year period, the dialogue centred on the potential and actual use of scaffolding within coaching practice. Consequently, we decided to explore, in depth, Jake's use of scaffolding when coaching Sara during a yearlong preparation for a target competition. In essence both procedure and method alternated between realising and refining a detailed understanding of scaffolding through Jake's coaching practice.

Following the yearlong coaching, data collection involved the lead author conducting five in-depth semi-structured interviews with Jake over a three-month period. In total, approximately 260 minutes of interview data was audio recorded and transcribed verbatim. The initial interview focussed on Jake's background and obtaining an overview of the year in question, allowing identification of areas for further exploration (Kvale & Brinkmann, 2009). The following four interviews concentrated on Jake's coaching interactions with Sara, and were generally progressive in nature (Freebody, 2003). In preparation, we critically revisited the content of previous interviews, whilst analysing and identifying topics for upcoming discussion. During interviews, probes were used for further clarity and understanding, whilst also allowing for the exploration of emerging areas of interest through critical sharing of experiences and interpretation of events (Kvale & Brinkmann, 2009).

Data analysis

Data analysis began during the interview phase and was followed by five months of biweekly "data analysis sessions" between the research team inclusive of both "theoretical discovery" and "theoretical refinement" (Puddephatt, Shaffir, & Kleinknecht, 2009, p. 15). Specifically, this was an iterative process, alternating between an emic and etic reading of the data (Tracy, 2013). The emergent (i.e. emic) approach required developing an understanding of Jake's experiences, paying specific attention to identifying key events, characters, and moments that appeared crucial to his actions

during the period under study (Sparkes & Smith, 2014). Constant consideration was subsequently given to identifying narrative themes selected, developed or rejected to keep Jake's story intact (Smith, 2017). The first author led the process using a story analyst standpoint inclusive of data from Jake's interviews, with the co-constructed narrative analysed and results presented as such (Sparkes & Smith, 2014). Consequently, the writing of the story itself (i.e. findings) led by the first author became a way of "knowing" (Richardson, 2000), providing an opportunity to access, analyse and draw meaning from what Jake the coach did in relation to scaffolding.

The analysis also included an etic component, involving the consideration by the research team of Jake's experiences in relation to a range of existing theories (Tracy, 2013). This interpretation further enhanced the analysis, with evolving agreements used to rebut, expand and qualify the primary sensitising concept of scaffolding (Puddephatt et al., 2009). Having said that, the thorough reflective and reflexive action embarked upon allowed for authentic analysis and theory development, ensuring that the data was not forced into a pre-existing framework (Finlay, 2002). Hence, new, albeit related, concepts emerged further illustrating the "living breathing world in question" (Puddephat et al., p.4). For example, critical discussions on data relating to maintaining Sara's confidence while creating challenging learning environments led to Gidden's (1991) work on ontological security. The analysis also involved a contested dialogue between concepts and the data; a dialogue which informed our collaboration as researchers (Chi, 1996). Consequently, although we considered various theoretical concepts, consensus was reached in our interpretation of Jake's experiences presented in this study (Tracy, 2013). It should be evident from the above that the analysis and writing were not isolated stages of the research process (King, 2016). While acknowledging that the analysis presented can be only regarded as provisional the intertwined elements of interpretation, scrutiny, revising and editing produced multiple iterations until it was felt that the key elements of Jake's tale had been portrayed satisfactorily (Frank, 2010). As part of the reflexive nature of the study, the final representation was also shared and discussed with Sara.

Findings

The findings are presented as a story, organised into a series of progressive segments exploring and including Jake's perceptions of scaffolding Sara's learning. Each section explores a critical stage during the year; starting with the context and culminating in the final target competition.

The backdrop: planning and acting "in relation to"

The previous year had been *"a bit of a flop"* mainly due to Sara's sub-par performances at major events. This resulted in serious *"soul searching"* from both Jake and Sara at the start of the year about her place in the sport. Jake saw his role as being both realistic and optimistic about Sara's gymnastic future, undertaking research to provide evidence about what was possible. This included "*examining all the data from recent results, her own and her competitors, to paint the best possible picture about where [Sara] needed to be . . . . and what we needed to put into place to get her there*". Sara, in turn, committed to "*make up for her previous disappointments*", agreeing that a podium finish at the end of year targeted event in December was possible. From here, drawing on the "needs analysis" undertaken, they constructed a plan to outline, "*with as much clarity as possible, what we'd need to do to achieve the agreed outcomes*".

In addition to benchmarking, a focus was placed on tactical, technical, physical and psychological components that would help realise the agreed objectives. The main factor identified was to improve Sara's ability to better cope (thrive) in the pressure of "*big competitions, whilst being away without any social support . . . .without me there, without her family there*".

The training context

There were some important rules of practice when Jake coached that prioritised efficiency of work in the somewhat limited time available. For example,

> *. . . you don't want to be talking [to the gymnast] when they are on the trampoline . . . . if I spend time giving feedback when they're on the bed it means that others can't work. So, the gymnasts finish their work and get off, so somebody else can get on, whilst feedback is provided [to the gymnast who had just worked] 'on the floor'.*

A perceived reason for Sara's poor performance in one of the previous year's events was fatigue from over training and competing. Consequently, in each session, Sara recorded her training outputs, developing a relative understanding about the volume of work she could physically cope with in a session or over a week. At the start of every session, a standardised 10 jump test provided a good indication of the level of physical demand that she was likely to attain during the training.

In terms of session content, although the overall plan provided the structure and direction, Jake and Sara then "*worked together to fill out the detail*":

> *I wouldn't be telling her exactly what to do. I'd say 'you're going to do ten set routines and eight voluntary routines this week', and Sara could make decisions on how many she would do each session. We'd constantly negotiate the structure of her overall training programme in relation to what she'd done in recent sessions and how she was feeling on the day.*

In her training diary, Sara recorded her success rate (number of completed routines versus number of attempts) and how she felt during and after each session. Keeping these records was one element of the constant evaluation process, supplemented by studying videos and pictures of shape quality, competition results, and routine times [a proxy measure for "jump" height achieved]. In terms of interactions, Jake valued dialogue:

> We'd have detailed conversations about what was going on, sometimes around complex ideas. She was a competent athlete, she'd been around the sport a long time, and she was clever; there was no point telling her things she already knew.

His focus was on shaping Sara's "*knowledge and understanding by talking about things that added value*".

Jake's observations and interventions were always informed by a clear understanding of, and in relation to, the agreed learning objectives. He carefully analysed her performances to identify what would make the most difference, ensuring that subsequent conversations "*took her to places that she otherwise wouldn't be able to get to*". When used, questions tended to take two forms. The first targeted developing Sara's awareness and knowledge in relation to a specific learning outcome. For example, one skill in Sara's "vol", the timing of the exit, was inconsistent, sometimes leading to routine failure or poor transition to the next skill. Here, a question such as "What did you see on the point of exit?" might be deployed, as the timing of the exit determines the quality of visual information available to successfully execute. In this way, Jake supported Sara's agency to understand and develop her performance. The second focused on developing his knowledge of Sara's understanding and performance; to discover "*things you don't know; things that you can't see*" from observing. Such questioning would focus on what she saw, heard and felt during her performance in relation to the learning outcome of the session. Jake's understanding of how Sara determined where she was in space, and made decisions within her performance, were crucial in knowing how to support her learning and development.

Catastrophe at an international competition

During the first six months of the year, Jake was pleased with Sara's progress as the technical and physical changes were "*working really well.*" Although they discussed dealing with the main area of improvement, "*performing under big competition pressure*", he was "*still of the mind that if she was*

prepared properly on the trampoline . . . . she would be able to cope". He felt that Sara's performance in training and at a domestic qualifying event about four months into the programme confirmed this:

> *She was successfully completing her work before the competition. She'd started completing 'vols' about eight weeks out. Whilst she started with poor consistency rate, in the last week or two before the event it was over 90%. At the competition, she exceeded all of her targets. I remember thinking 'wow, okay, we're on track'.*

After her struggles the previous year, Jake was naturally happy for Sara to experience security and success, "*sometimes when things are going really nicely, you just let it go, you've got to enjoy these periods; they don't come around too often!*" However, about four months from the target event, Jake and Sara experienced a significant setback at an international competition:

> *Sara had only failed two routines in all the years she'd been jumping with me. One at the biggest international event she'd done . . . but this one - a compulsory [simple first routine]? What on earth was she doing failing that? She just doesn't do that; it was bonkers. And worse, she consistently made technical errors we'd specifically worked on in training. In that competition everything we'd done [for the previous six months] went out the window.*

This "catastrophic" experience of failure in the competition made him re-evaluate:

> *We were too much in the security zone; it was going too well. The notion of athlete insecurity, making it hard for people, is absolutely necessary if you want to get the best out of them; if you want to push them on. We were too safe.*

This experience made Jake realise that, despite the previous seemingly good training and competition, they had not made progress in relation to the key learning required to deal and perform under big competition pressure without any social support.

The next few months: making it tough

Six months of excellent technical and physical training had seemingly made no difference to Sara's ability to thrive independently at a big competition. A sport psychologist encouraged Sara to write a "what–if?" list of everything that could pose a problem during her target competition.

Additionally, Jake decided to "do" (i.e., activity) and "be" (i.e., the act) something different; "*I remember saying to myself, 'I'm going to be a bastard now'*". He focused on creating situations that made Sara confront and deal with her "what-if?" scenarios. This caused Jake some personal angst and a dilemma in that "*I felt I had to present myself as somebody who was being deliberately hard, but in a way that she knew it was in her best interests*". That Sara had written the "what-if" list was key in gaining her buy-in to the

process. Throughout, Jake strove to maintain Sara's security in their relationship, whilst pushing her to do things which made her uncomfortable and insecure. It was something of a paradoxical strategy:

> When I'd say I was being horrible I'd laugh with her knowingly; making sure she knew that I was doing it on purpose, that it was part of an act . . . . 'I'm doing this because it's in your best interest'. It was important that she knew that I hadn't actually changed, in order to maintain the relationship.

The types of activities Jake subsequently presented to Sara were designed to *"make things different, to break the routine"*, *"make her uncertain"* and to *"challenge her in different ways"*. These included *"having somebody stand in her eye-line near the trampoline because I know it puts her off"* and, in replicating competition conditions, having her *"do her warm-ups on one trampoline but compete on the other"*. Although this strategy was about making things *"really hard so Sara was in situations where she didn't always feel able to cope,"* it was also consistently emphasised that any mistakes were learning opportunities:

> You only ever really learn where people are when they fail, by making them insecure, by working out where they are so you can work out what they need to do to get them where you want to be.

Although these struggles were considered crucial for Sara's development, due to her traditionally being very competent in training, it sometimes led to *"real frustration"*. Consequently, getting her to understand this as a necessary part of the learning process was, at times, a *"tortuous"* process:

> You've got to be so patient, and you've got to help them be patient, and keep on working so they understand why it's okay [to fail], to stop them just getting totally deflated because they are not able to do it [immediately].

This tension of being both provocateur and supporter was something Jake found fascinating and important, continuing right up to the target international.

The last six weeks: a matter of risk and trust?

Jake believed they had made progress through making training *"tougher"*. The most important activity that he wanted Sara to complete [to demonstrate her readiness] was an independent simulated competition. An opportunity for Sara to undertake such a "mock" competition emerged when Jake was unable to attend training. However,

. . . I finished early, so . . . . I went and watched her in a spot where she couldn't see me and took some notes. Warm up was fine and she did a good compulsory routine. Then, she spectacularly failed her voluntary routine. Again, doing none of the things we'd practiced in training.

When Sara realised Jake was there she reacted angrily, "*because I hadn't done what I said I was going to do. If I hadn't been there at all it would have been fine, but I was and I didn't tell* her. . . . *that caused some challenges for us for a while*". It took several weeks to recover the damaged confidence, whilst Jake came to the realisation that (for him at least) "*pushing people [risk] has to be based on consensual understanding, that you are doing it in somebody's best interest*".

After a period of relational and performance repair, Jake scheduled another independent simulated competition. As it turned out, this attempt also resulted in "failure" of the routines, however, crucially, there was evidence of improvement. Sara produced some excellent work during the preparation period, resulting in the key learning that "*there's no point winning the warm-up*". This led to the development of a better structure and focus during the period prior to the competitive routines to enable Sara to "*produce her best in the moments it matters*".

The delay in holding the second simulated competition, and the time required to scaffold the learning derived from it, left Jake with a dilemma. Would he, in the last week of training before Sara flew out with the team, give her one more attempt at an independent simulated competition? If she "*failed there was no time to put her back together again before her target competition . . . . . . the danger was she'd have proved to herself she couldn't do it on her own*". In weighing the benefits and the risks, Jake concluded that the whole of the preparation period had been building towards such a session. In the end

. . . she just absolutely smashed it! She did all the stuff she should do and it was like 'that's it, you're ready to go'. I remember writing 'Yes!' in my notes . . . It was one moment in my coaching life where I couldn't have prepared her any better.

The competition: ghost scaffolding

Jake wanted to provide Sara with as much structure and security as he could for when she was away with the team:

We thought the more structure Sara had [at the competition] the better . . . that she'd be able to cope with the inevitable difficulties. Plus, she'd practiced all the things she was worried about on the 'what-if?' list, so she knew what to do when something did happen.

At the event Jake and Sara were ecstatic with her silver medal performance. It validated the huge amount of thought, engagement and work that they'd put into the process to develop her capacity to thrive in an international event:

> It wasn't just about the medal . . . She'd been able to produce those performances we'd been building towards; she'd been able to reproduce all the great work she had done in training, in the moment when it was most important.

Discussion

The following provides a critical interpretation of the coaching story recited above. This is organised into three sections which emerged during the data analysis in relation to the research objectives. Initially the focus is on the scaffolding central to Jake's approach, and is followed by an account of the contextual and relational nature of his actions.

Scaffolding learning: a pedagogical and social endeavour

Jake's story sheds valuable light on the complex nature of socio-pedagogical interaction within sport coaching. Scaffolding actions are evident throughout, with Jake explicitly using his theoretical appreciation to guide his practice (Jones & Thomas, 2015). In this sense, his concern was to provide appropriate support for Sara's learning, to enhance her development (Vygotsky, 1978). Hence, Jake structured progressive pedagogical activities that developed her conscious awareness of actions alongside proficient performance of skills. A key point here is that when scaffolding learning, decisions do not take place in a vacuum; they occur "in relation to" (Crossley, 2015).

From a cultural-historical perspective, macro coaching scaffolding practices are nested in nature, located in and informed by the wider practices of governing bodies while also consisting a club's own history, practices, purposes and cultural values (Edwards, 2017). Such practices, made demands on Jake's engagement with Sara, initiating specific actions. For example, the competition rules of relevant governing bodies shaped the tactical decisions about routine selection and performative elements (Hodkinson, Biesta, & James, 2008). Such macro practices', however, were also contingent and emergent, with both coach and athlete having the agency to work on and reshape conditions in which they act (Edwards, 2017). Jake made decisions in relation to understanding Sara's history, as a trampoline-gymnast and person, to make contextually relevant decisions to

assist her progress. Hence, undertaking a "needs analysis" was important as it allowed for realisation of the required attainment and scaffold appropriately for her target competition.

When meso scaffolding within training, both the culture and practicalities of the local environment were crucial, with the relatively short weekly training time shaping Jake's decisions to prioritise short practice "goes" and provide feedback off the trampoline. At the micro level, Sara's level of physical readiness was considered at the start of training by using a standardised test to measure jump height, with the results influencing the level of challenge and focus of exercises during the session. Thus, all "scaffolded" decisions and actions reflected an interplay between the micro-, meso- and macro-levels of scaffolding (Jones & Thomas, 2015). Jake's decisions were made in relation to the overall learning objectives, the cultural context and Sara's performance.

The overall process might be described as guided mediation with a "more capable other" (Vygotsky, 1978). Every decision was formed in relation to other factors, with the ability to identify and interpret the connections seemingly central to supporting Sara's effective practice. A significant component within this micro relational landscape hinged on what Jake termed "dialogue", which supported the development of Sara's understanding of specific conceptual information through verbal interactions (Vygotsky, 1978). Here, Jake valued Sara's explanations and reasoning, thus building upon Nystrand et al's (1997, p.72) belief that importance be placed on "instruction [that] requires students [athletes] to think, not just to report someone else's thinking." In this regard, questioning was a mediational tool for Sara to structure her thoughts and develop conceptual understanding; and not a process of replicating Jake's reasoning (Bakhtin, 1986). This relational act, therefore, was twofold, first for Jake to gain an understanding of Sara's thinking and/or as a means for him to raise awareness and knowledge of her own performance by constructing a meaningful verbal account in relation to a specific learning objective.

A key element in the story is the importance of recognising opportunities that facilitate a dynamic assessment of the learner's progress in relation to their key objectives. The most painful experience, the catastrophic competition, was also the most crucial as it identified that the scaffolding demands had been inappropriate. This fostered Jake's understanding about the need to drastically change approach in relation to developing Sara's ability to cope (thrive) independently at her target competition. From this moment onwards, greater focus was maintained on this specific learning objective aligned to the development of her agency (Edwards, 2017). Following this realisation, Jake and Sara engaged in carefully designed meso and micro learning activities (e.g. simulated competition) located at the boundaries of her capabilities within her ZPD (Vygotsky, 1978). Training was scaffolded

accordingly, allowing them both to assess learning dynamically in relation to Sara's ability to deal with the difficulties she would face at her target competition (Alexander, 2008; Lajoie, 2005). For example, presenting unfamiliar conditions, warming-up on one trampoline but competing on the other, highlighted that performing well during the competition routine was paramount and not "winning the warm-up". At the heart of this approach was Jake's "contextual literacy"; his ability to carefully read and reinterpret the socio-pedagogical landscape (Jones & Hemmestad, 2019), and scaffold learning opportunities to develop Sara's agency as a conscious learner to support her progress (Jones & Thomas, 2015).

Supporting and developing agency through scaffolding

A constant predicament for Jake during this period was the development and/or disruption of Sara's ontological security in terms of her being and learning (Giddens, 1991). Continuous judgements were made about when and how [hard] to push and support, in order to ensure a sense of overall progress, whilst maintaining her confidence in the learning process and of who he was as a coach (Giddens, 1991). Jake's decision, for example, to give Sara one more attempt at an independent simulated competition within a week of the target event was based on his trust in her ability to complete the exercise successfully (Luhmann, 1988). Despite the high degree of risk involved, where the possible consequences of failure were significant, the potential positive learning experience made the decision to trust Sara, and the work they had undertaken since previous attempts, worthwhile (Luhmann, 1988). In doing so, Jake presented himself as a coach who cared, understood and was focused on developing Sara's athletic needs to be successful at the target competition (Purdy, Potrac, & Jones, 2008).

Following the competition "catastrophe", Jake realised he needed to do more to develop Sara's capacity to cope (or thrive) independently with the demands of high-level competition (Sitkin, 1992). Initially, he believed the preceding period had been a "perfect training phase" to overcome this issue, where Sara had consistently achieved the learning outcomes. On reflection, what became clear was that Jake had not engaged in social and pedagogical practices with elements of risk that sufficiently challenged Sara's security to enhance her learning. What may have been an inappropriately designed ZPD resulted in an absence of scaffolding limiting Sara's ability to develop her agency as a learner who could handle the rigours faced at her target event (Jones & Thomas, 2015). In response, the "what if?" list was created, providing the opportunity for Jake to understand the issues she feared. This allowed him to target these concerns over the preparation period and to prioritise training exercises with uncertain and ambiguous situations that developed understanding and competence related to the key learning

outcomes (Jones & Ronglan, 2018). In doing so, Jake directed his efforts at constructing a ZPD and scaffolding practices that directly confronted issues and simulated or exaggerated aspects of the competition environment (e.g. disrupting her warm-up routine). This imposed challenges on Sara, enhancing her ability to respond to changing demands and positioning her as an independent and conscious learner. These supporting structures, however, were never fully withdrawn and existed as "ghost" scaffolds, guiding Sara's effective response to situations she could not previously master at the target event (Jones & Thomas, 2015).

Maintaining respect and security to scaffold learning

Jake gave primacy to maintaining and building his relationship with Sara, while reading and interpreting the social landscape was crucial to judging and reacting accordingly (Purdy & Jones, 2011). Intentionality seemed important in this respect, with it being imperative that Sara perceived Jake to be acting in her best interests (Noddings, 2013). This was achieved partially by being attentive and empathetic on and off the trampoline through watching, listening, engaging in dialogue and generally "being there" for Sara. Great care was taken to maintain her respect; giving consideration to both their relationship and her learning (Purdy et al., 2008). Consequently, Sara generally reacted positively to Jake adopting a "tougher" coaching demeanour and implementing more challenging exercises. In every situation, the sincerity of Jake's actions, and Sara's confidence in him, seemed to be of principal importance (Noddings, 2013). When Jake broke this agreement and changed plans to covertly observe one of her independent competition practices, it caused damage to their relationship (Jones et al., 2013; Purdy et al., 2008). Consequently, despite the imminent competition, subsequent high impact and potentially risky pedagogical challenges to support Sara's learning were delayed to allow for relational repair. Further provocations had to wait, as Jake perceived their success was founded within a socio-pedagogic relationship where Sara was confident decisions and actions were taken in her best interests (Jones, 2007).

In the challenging final months of preparation, Jake aimed to sustain Sara's ontological security through maintaining her confidence and sense of reliability in him as a coach (Giddens, 1991). This involved interacting with Sara in ways intended to make her secure in his presence, allowing her to have confidence in him and accept his support, despite also being the cause of her frustrations. Engaging with Sara in what Jake called a "collaborative approach" developed shared understandings; that is, ways of commonly thinking and reflecting on contextual action(s) (Jones & Thomas, 2015). Sara's involvement included discussions "around complex ideas", allowing opportunities to reciprocally and respectfully express concern, opinions,

knowledge and emotions (Denison, Mills, & Konoval, 2017). Jake perceived that his genuine care enabled Sara to engage with his advice and cope with the tensions created by his dual role as supporter and provocateur. While developing security through a caring socio-pedagogical relationship involved engaging in these actions, it also consisted of constructing a ZPD to realise Sara's learning, agentic capabilities, and development as a learner (Jones et al., 2018). Ultimately, this involved implementing scaffolding that stretched and developed her agency as a learner while maintaining her respect and security. This important finding underscores the complexity and fragility of such interpersonal socio-pedagogical relationships and the non-linearity of athlete learning.

Conclusion

The purpose of this study was to advance the notion of scaffolding in sports coaching, developing insight into coaching as a socio-pedagogic activity. In summary, the findings demonstrate that, for scaffolding to occur within an appropriately constructed ZPD, coaches must understand both the learner and read the cultural context within which the activity is situated. In order to develop an athlete's understanding and performance, it is crucial to build a ZPD with challenging parameters and to provide scaffolding that develops them as an independent and conscious learner. Importantly, whilst coaches' actions are made in relation to a myriad of factors, consideration must also be given to elements of agency and of the "who" of the coach and the way this is incorporated into the socio-pedagogical relationship. The findings in this study indicate that the agency of an athlete and a coach is of a transformational nature, reflecting dialectical interplay between the processes of continuous building and enacting of their agentic capabilities. This is an interpretation that advances the notion of scaffolding through merging the pedagogical and social, providing a framework for understanding scaffolding as the "doing" of coaching.

In offering a progressive framework for learning and development from our findings, we present scaffolding as "a broad guideline to practice and not as direct advice" (Flyvbjerg, Landman, & Schram, 2012, p. 4). The purpose is not to present an "objective truth" or to claim universal generalisability (Bochner, 2014); we recognise that the story is written from a single perspective and that different tellings of events could be presented. The value of the study lies in its effort to critically interpret and understand shared cultural action, providing specific and relatable examples of acts of scaffolding within the contested world of sports coaching (Thompson, Potrac, & Jones, 2015). It emphasises that at the heart of coaching is enlightened directed pedagogical and relational sensitivity (Jones & Hemmestad, 2019; Jones et al., 2018), while further enhancing the historical,

unfolding and agentic nature of scaffolding in coaching practice. As such, this study has implications for educating and developing coaches as "practical theorists", making cutting-edge content relevant and accessible, while allowing for contextually sensitive integration into practice (Corsby, Thomas, & Santos, 2021). From this perspective, scaffolding in coaching practice should be considered as a progressive socio-pedagogical framework aimed at enhancing coach and athlete's agentic learning and development.

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