Original Article (short paper)

The importance of history, language, change and challenge: What Vygotsky can teach sports coaches.

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Abstract — Aims: In recent years, recognition of the pedagogical nature of coaching has gained increasing traction. However, within this line of inquiry, only limited attention has been given to the work of Lev Vygotsky. The aim of this article is to construct a more comprehensive case about how Vygotsky's principal ideas can aid our understanding of both the act and process of sports coaching. **Methods:** The method involves constructing a case from Vygotsky's original work, and how it has been interpreted by others, related to the applicability of using some of his concepts to further our understanding of sports coaching practice. The **case** presented represents an interpretive and considered approach to the question and task at hand. **Discussion:** The discussion is centred on the utility of Vygotsky's theorising to sports coaching practice. In particular his advocacy of (1) the cultural-historical perspective; (2) the claim of language as the greatest mediator in learning; (3) how perezhivane contributes to such knowledge generation; (4) the zone of proximal development and the role of the 'more capable other' within it; and (5) the dialectical approach, focussing on the dynamic relationship between everyday and scientific concepts, are given primacy. **Conclusion:** Finally, a reflective conclusion summarises the main points made and suggests possible future courses of action.

Keywords: sports coaching; Vygotsky; pedagogy; mediation; imitation

Introduction

Since Jones[1] explicitly conceptualised the role of the sports coach as educator over a decade ago, recognition of the pedagogical nature of coaching has gained increasing traction[2,3]. Ideas from constructivist learning theorists in particular have come to be used as not uncommon currency when both making sense of coaching practice and how to teach it. Scholars given the greatest attention within this development include Jean Lave and Etienne Wegner and their notion of a 'community of practice'[4], Donald Schön and his ideas surrounding reflection[5,6], Nell Noddings'[7] ethic of pedagogical care[8], and Anna Sfard's metaphoric use of learning by acquisition and participation[9]. The tendency was most recently encapsulated through Nelson, Groom, Potrac[10] text entitled 'Learning in sports coaching', where a broad range of pedagogical perspectives were outlined, and their possible relevance to sports coaching practice suggested.

A further theorist given increasing attention in this regard has been Lev Vygotsky. Here, work by Jones and Ronglan[11] and Potrac, Nelson, Groom, Greenough[12] has somewhat interrogated Vygotsky's writings in terms of what they may mean for coaches and coaching. It is a line of inquiry which also includes a tentative examination both of Vygotsky's students[13], and related ideas[14,15]. Although making welcome inroads in terms of opening alternative coaching horizons, this engagement with Vygotsky's thinking has been somewhat focussed on, and thus been limited to, his idea of learning within a 'zone of proximal development'[12]. Indeed, work by Potrac and colleagues[12,16] directed attention towards ZPD as somehow being representative of Vygotsky's principal achievement, which itself has been inadequately quoted and theorised. This has resulted both in a general misappropriation of Vygotsky's thesis and, hence, the underplaying of the value of his writings for sports coaching.

A primary purpose of the current paper is to open questions about the contemporary burgeoning of Vygotsky's work as related to sports pedagogy. More specifically, in building on existing literature, the aim is to construct a more comprehensive case about how Vygotsky's principal ideas can aid our understanding of both the act and process of coaching. Not being content with the development of a more nuanced description, a second intention of the paper is to present Vygotsky's work as a structure for practical as well as theoretical coaching improvement. Here, recourse to existing research is made throughout the paper, thus locating such thinking firmly within the sports coaching landscape.

This task and process as outlined, is somewhat aided by the numerous gaps and digressions that exist in Vygotsky's work; a relative ambiguity that can be attributed to his untimely early death. What we attempt here then, is to address some of these asides in terms of thinking through what the larger concepts associated within his work can mean for athlete learning. In this respect, the paper marks a tentative, albeit more nuanced, construction of some of Vygotsky's original conceptions using sports coaching research. In making a case for its significance, the paper's claim to originality must inevitably be tempered as it borrows heavily from Vygotsky's writings as well as others' interpretations of them. Consequently, the purpose, as opposed to opening totally 'new areas of investigation', can be seen in terms of clarifying, furthering and developing earlier work, particularly within a sports coaching context.

In terms of structure, we firstly outline the roots of Vygotsky's theorising as encapsulated by his advocacy of the cultural-historical perspective. For him, without recourse to the past, there could be no understanding of the present. Discussion subsequently turns to the claim of language as the greatest mediator in learning, before an exploration of how the notion

of perezhivane (roughly translated as the 'lived experience') contributes to such knowledge generation. This is followed by a detailed discussion of the zone of proximal development and the role of the 'more capable other' within it, before an examination of the dialectical approach, focussing on the dynamic relationship between everyday and scientific concepts, is presented. Finally, a reflective conclusion summarises the main points made and suggests possible future courses of action. In having criticised others for under-representing Vygotsky's work, we are aware that we could also be open to such assessment. Indeed, we admit that many other Vygotskyan concepts absent in this paper also hold considerable relevance for coaching, whose omission should not be read as intellectual dismissal. These include, the need for 'whole' or 'authentic' activities, the belief that learning precedes development, the related manifestation of higher mental functions, and the idea that development cannot be separated from the social context in which it takes place. Accepting the limitations of what can be accomplished within a single paper, decisions for what to include then were informed by a number of considerations; for example, the foundational nature of the concepts discussed (e.g., the cultural-historical perspective and mediation), their common (often misinterpreted) use (e.g., ZPD), and, in line with the stated aim of the paper, their clear legible structure(s) as drivers and catalysts for progressive practice (e.g., perezhivane and the more capable other).

A cultural-historical perspective

To best understand the assumptions which lie behind the cultural-historical perspective, it is (naturally) necessary to historically situate its development. The theory developed during the economic and political upheaval provoked by the Russian revolution of 1917; an event which brought about fundamental changes in ways of thinking and acting. Here, Vygotsky, and two of his principal student colleagues, Leont'ev and Luria, formed a working group known as the troika; a triumvirate which gave rise to the study of psychological phenomena based on Marxist thinking. Their intention was to appropriate Marxist dialectical materialism as a method for interpreting the human psyche. It was based on the argument that individuals can only be understood if analyzed in and through their materiality, history and movement. Through such a perspective, connections and associations between identified principles of psychological functioning were deduced, particularly in relation to the process of change over time. The subsequently developed theory claimed that human behavior and learning could only be explained through recourse to history and culture; that is, humans produce and reproduce their existence through social relations, which, in turn, are experienced in the activities they perform.

In asserting that learning happens initially at the group and secondly at the individual level, Vygotsky gave primacy to social relations and context as crucial to development. Consequently, according to Vygotsky, what we do, that is the actions we undertake with others, gives rise to interpersonal processes, which subsequently become our own as intrapersonal ones. In order for learning to become effective, therefore, it was postulated that human beings must be active; that is, to participate in experiences that enable them to appropriate the knowledge and skills responsible for transforming their consciousness development. Unsurprisingly, an important point here was that of individual perception or interpretation. For Vygotsky then, human consciousness has to continually wrestle with the sense and meaning of actions carried out by individuals within any social activity. Such sense can only be made through a consideration of the totality of the interaction; a consideration of its origin, its course of action, in addition to the mediating factors which shaped it.

This historical nature of coaching was recently albeit tentatively explored by Jones and Thomas[14] in articulating the 'scaffolding'[17] practices of coaches. Here, coaching was presented as not only a contextually contested activity, but also as a terrain possessing a particular past which allows a certain present. According to Jones and Thomas[14] "it is a position which locates athlete learning interactions within their contextual history; of the previous interactions between participants, and what such participants know of each other"[14]. A similar argument, inspired by Flyvbjerg's[18] (p. 375) statement that "history and sociality are the only solid ground under our feet", was presented both by Hemmestad, Jones and Standahl[19], and Jones and Ronglan[11]. Borrowing from Crossley's[20] concept of relational sociology, the latter paper in particular argued that coaching per se could only be understood in terms of its contextual history; including those evidenced utterances and relationships. Here, each current interaction contains a sediment of the previous, thus firmly structuring practice within its historicity. It appears then, that recognition of the socio-historical nature of coaching is beginning to take hold. Having said that, much more empirical meat needs to be placed on the embryonic theoretical bones, particularly in terms of how coaching relationships and dialogue evolve over time.

The issue of mediation

Crucial to the formation of human action in Vygotskyan terms was the concept of mediation[21]. Although non deterministic, mediators were considered the ways in which social, historical and cultural factors act upon individuals[22]. People's contact with the world was consequently considered to be mediated by material and symbolic objects grounded in culture[23]. Such mediation was deemed the connection between social and historical processes, and individuals' mental progressions. Human thinking then, was located socio-historically (as outlined in the previous section); to consider it, and the interaction it engendered, otherwise, was to engage with a very limited de-contextualised account.

According to Vygotsky[21], a fundamental mediator or shaping factor essential for any (temporal) transmission process between people was language. The importance here went far beyond a means of enabling communication. Rather, language was considered to possess a dual mediating role. Firstly, as a way of creating meaning allowing social groups to coordinate inter-subjective actions; and secondly, as a measure of facilitating self-regulation through inner speech, allowing individuals to bring actions under the control of thought. It is a standpoint

which privileges the importance of the meaning attached to the words spoken, as opposed to the words themselves.

This was a perspective encased in the aforementioned article by Jones and Thomas[14], where language was claimed to be the principal macro scaffolding practice of coaches. Such deliberate exploits fall under the category of 'visible' or explicit mediation; actions which require conscious reflection and intent[24]. Of course, 'invisible' mediations are just as, if not more, powerful in transmission processes. This is because they are embedded in sociocultural activities and related informal discourses. Indeed, such invisible mediations often come to define how people (e.g., coaches and athletes) internalise the social world they experience[24]. The genius of Vygotsky in this context goes beyond insightful deconstruction of everyday pedagogical practices, to giving credence to temporally and culturally created mediators, be they highly visible ones or not.

This was a point highlighted by Jones, Edwards and Viotto Filho[13], who, in borrowing from Leont'ev's[25] activity theory, provided an example of a coach's use of explicit mediating artefacts or 'tools' to develop both consciousness and meaning within athletes. In connecting the abstract to the concrete through the use of markers, cones and particular forms of talk, an attempt to provide personal meaning to conceptualisation was undertaken; an effort to mediate or guide the athletes' understanding and engagement with the task at hand. A further instance of such practice was provided by Corsby[26], who depicted a football coach's actions not only in utilising physical props such as a white board, but also through linguistically reconfigurating the message delivered. Here, team formations were presented as vertical as opposed to horizontal structures (i.e., 2-3-3-2 as opposed to 4-4-2), thus altering the players' perceptions and meaning making of on-field space and subsequent relational dynamics. Despite such tentative inroads in relation to better understanding the mediated actions of coaches, the scope for further development inevitably remains considerable.

The zone of proximal development (and the role of the more capable other)

As stated in the Introduction, coaching scholars' engagement with Vygotsky's writings have been largely restricted to his concept of a zone of proximal development (ZPD). What has limited potential utilisation for practitioners here, however, has been the decontextualized recommendation; that is, the inadequate appreciation of the cultural-historical context within which such action as the established of a ZPD takes place. Resulting suggestions, therefore, have lacked detail to practice. Taking a lead from Chaiklin[27], we similarly believe that Vygotsky's concept of a ZPD "is more precise and elaborated than its common reception or interpretation" (p. 39). The purpose of this section then, is to further clarify the concept of ZPD as intended, and to suggest how it can be actually used within sports coaching.

The ZPD is probably the most widely recognised of Vygotsky's concepts, and has been used within a plethora of pedagogical related settings (see Chaiklin[27] for a comprehensive list here). As previously stated, it has also found its way into sports coaching research and discourse[12,16]. Put simply, the concept refers to "what the child is able to do in collaboration today, he [sic.] will be able to do independently tomorrow"[28] (p.211). Popularity or fashion, however, has its price[27]. Here, rather loose usage has unmoored the concept from its theoretical intention; a tendency which prompted Palinscar[29] (p. 370) to claim some time ago that the notion was "probably one of the most used and least understood constructs to appear in contemporary educational literature". Notwithstanding the work of Chaiklin, the above comment retains relevance today, with much debate remaining about what the concept actually entails.

The concept of the ZPD was not central to Vygotsky's[30] (1998) thinking. Rather, it only pointed to a particular moment in the process of child development which was, in turn, posited as a series of relatively long stable periods punctuated by shorter episodes of crisis. The ZPD could be used in the transition from one 'age' period to another, and to identify a learner's current state in relation to developing the necessary functions needed for that transition. In this respect, Vygotsky claimed both objective and subjective ZPDs. The objective was normative in that it referred to general functions that needed to be formed within a given time frame, before the next period could be engaged with. Alternatively, the subjective entailed the development of the individual in relation to the objective.

A principal problem identified by Chaiklin[27], and one which has considerable relevance for coaches, is how to identify and assess a learner's ZPD. This was also a central question for Vygotsky himself, who claimed that: "A true diagnosis must provide an explanation, and a basis for practical prescription"[30] (p. 205). To somewhat address this conundrum, Vygotsky conferred importance on the act of imitation. Rather than inane, automated copying, what Vygotsky had in mind here was imitation as presupposing a degree of understanding; it was taken as being reflective of what a learner or child can't do without assistance. Imitation then, was considered "one of the basic paths of cultural development"[30] (p. 202); that is, as action that cannot be partaken in without assistance. Hence, if a learner has no capacity to imitate, it would be taken to mean that the intended learning would be beyond his or her ZPD. In Vygotsky's words; "Everything that a child is not able to do by itself, but can learn under the direction or collaboration of the adult or with the help of guiding questions, is included by us in the area of imitation "[31] (p. 268).

Being a rather elusive path to follow, this deconstruction of the ZPD and how it can be used for action is somewhere previous coaching scholars have not ventured. As applied to coaching, however, such an interpretation of a ZPD requires a coach to somewhat identify the development stage of an athlete, a judgement that can be supported or not through providing new knowledge to 'imitate'. This would be knowledge that, despite a developing maturity, would be beyond the scope of the independent learner. Through testing the limits of imitation, the intellectual and conceptual boundaries of the individual are probed[32]. Two critical points in relation to coaching come to the fore here. Firstly, the need for interaction or collaboration with athletes in assessing the limits of their ZPD. Echoing the

recent work of Jones and colleagues[11,14], this positions coaching as both a contested, social phenomenon, as well as an historical one. Secondly, it presumes the ability of coaches to 'see' (that is, recognise) imitation through action. This is because, as opposed to classroom contexts where learning is assumed to have taken place from the evidence of a child's verbal or written response, in sport, learning can only be identified through the active demonstration of the desired outcome.

The ability to foresee or infer consequences has previously been discussed as a vital ingredient in the practical wisdom of coaches[19]. As opposed to an acontextual creative act, however, Jones and Corsby[33] claimed the presence of sociality and related intentionality as major players in the process; as powerful forces on "forms of ideas, concepts and systems of thought"[34] (p. 1). The subsequent case made was that we don't 'see things as they are but as we are'. This is not to leave coaches (and others) as mere cultural dupes, but to raise awareness about the influence of the past, thus placing observations as a social as opposed to a biological act. It was a sentiment somewhat explored through the recent integration of Mason's (2002)[35] 'pedagogical noticing'[36] and Luhmann's 'theory of observation'[37] into sports coaching. Here, it was argued that a better understanding of what coaches 'see' and, therefore, what informs their actions, perhaps holds the greatest significance as an area of future sports coaching research.

As opposed to being only explanatory or deconstructive, a progressive way forward into developing such observation skills in coaches is offered by the foundational work of Dewey[38], and his concept of 'systematic inference'. For Dewey[38], suggestion lay at the heart of inference; in "going from what is present to something absent" (p.75). The referred to suggestion contains an idea gleaned from a contemplative gathering and evaluation of current evidence. It is also an action that requires experimentation and courage, in addition to a double movement to and from meaning (that is, from observation to meaning to further observation). Through such forward thinking (as opposed to backward reflection), seemingly isolated events can be connected into a single whole. Similarly, and crucially in the context of this article, from engaging in such action, coaches can learn to 'see' the outer limits of athletes' ZPD; in essence, to where they should pitch their coaching in terms of the ability of imitation to take hold in those they coach. Examples of coaches' constructing and working at the boundaries of athletes' ZPD was given by both Jones and Ronglan[11] and Jones and Thomas[14]. While one paper[11] focussed on the precise exercises or scenarios given to athletes through the creation of unstable situations, the other[14] articulated how such zones could be constructed at macro, meso and micro levels. Both papers built on the conceptualisation of coaching as orchestration[11], of prudently considered strategic actions which, in themselves, possess uncertain outcomes in order to stimulate others' learning. It is a doing akin to a fisherman's cast, reflective of positioning action beyond the immediate sphere; of suggesting a carefully constructed idea which the learner can only initially imitate but, with further time and assistance, develops into understanding and ultimate internalization.

The more capable other

A crucial element in the interdependent process embedded within the ZPD is that of a 'more capable' or 'more knowledgeable other'[28]. Here, recognition is given to the necessity for someone more able to guide someone less able through a learning task. According to Vygotsky, such a 'more capable' individual, however, does not need to be an adult teacher per se, as they could equally include the actions of more capable peers or even that of new knowledge[23]. In many ways then, the more knowledgeable other provides the so-called scaffolding that facilitates the development of the learner. Through the processual context-bound interactions, learners are assisted to an understanding of the concept under study[39].

A vital component in this interactive development is the earlier discussed act of imitation. By imitating the more knowledgeable other, or the discourse suggested by that other, the learner engages with an idea far beyond what he or she would be capable of unaided. Of course, this imitative process contains innumerable mediatory factors loaded with meanings, the most significant of which is language (as discussed earlier). This is because, no matter the context, representation matters, it has consequences[40]. How people are portrayed, spoken about and treated, impacts on what they think of themselves and how they subsequently behave. Hence, how a coach demonstrates and explains ideas, values, strategies, and speech patterns, influences greatly what an athlete internalises and learns from[11,14].

In building upon the work of others[41], such a position further argues against the fallacy of 'empowerment' in coaching, where a rather simplistic 'athlete centred' philosophy grounded in elements of self-determination has argued that athletes should drive their own learning. Alternatively, the notion of a more capable other implicitly recognises the condition that "…all social relations are relations of power"[42], with no social space existing beyond authority[43]. Indeed, according to Jones and Wallace[44], a principal problem with the notion of empowerment is that those who advocate it have usually paid far too little attention to the contextual omnipresent nature of power within it. This is not to give credence to an unproblematic authoritarian coaching regime, but to posit learners as always 'in relation' to information and knowledge (be it from others, or from other documented/digital sources) they are yet to encounter. Such power as held and exercised by a more knowledgeable other then, is consequently envisaged as being generally enabling as opposed to repressive.

Perezhivane

As with other Vygotskyan concepts, the problematic translation of the Russian word perezhivanie has been widely noted and discussed by Western scholars[45]. Nevertheless, general agreement exists about its reference to 'experience', be that in terms of emotion-personal content or, in Vasilyuk's terms, 'experience as struggle'[46]. According to Toassa[47] (p. 16), the term "perezhivanie derives from the verbs jit - to live, and to perejivát - to live or to experience existence". In terms of Vygotskyan thought, "a

perezhivanie is always related to something which is found outside the person"[48] (p. 342). This translated to facing a difficult or critical situation which allows for the learning or conscious development of the individual. In this way, external events were seen to cause internal transformation through a process of internalization, leading to the development of consciousness[47]. The concept of perezhivanie then, represented the indivisible unity between personal and situational characteristics.

Having said that, although the trigger for the whole process was considered to be the critical situation, its influence was not fully determined by "the objective conditions of the situation, but rather, more than anything, by the meaning that the situation has for the [learner]"[46] (p. 3). This contributed to Vygotsky's general argument that a single situation affects different learners differently. This is because the influence that the environment exerts is determined by the meaning each learner forms of that situation. Hence, as well as being something found outside the person, perezhivanie was considered to be how an individual was experiencing it. The crucial issue for Vygotsky was the meaning derived from the experience, with such meaning being responsible for subsequent structural learning. Consequently, Vygotsky's perezhivanie, as opposed to any particular critical situation faced, related to the mediating prism through which individuals made meaning or sense of the context.

In a similar vein, although when experiencing-as-struggle is successful the subject undergoes emotional transformations[49], the work or the main part of actualizing experience comes not from emotion but from perception, thinking and attention[49]. Consequently, the transformation that occurs in the experience-as–struggle results from the change in the mediating prism through which we understand or perceive situations to be. Leont'ev's example of prisoners is illuminating here;

> The prison authorities obliged [the prisoners] to move earth from one place to another for no reason. In the beginning of the process, the situation was understood by the prisoners as meaningless, as a kind of torture, not only physical, but also psychological; this was their perezhivanie at the beginning. The product of their experiencing-as-struggle was a complete transformation of this perezhivanie. They came to understand the pointless work as training [that] the authorities were giving them as a present, to keep up the physical and moral strength they would later need to fight autocracy[46] (p. 6).

How can coaches use such knowledge? Or put another way, how can perezhivanyia be constructed? In line with Vygotskyan emphasis on language, a particular way to free thinking from dysfunctional conflict and defensive routine, is to employ the generative power of metaphors. Indeed, according to Barrett and Cooperrider[50] (p. 222), a metaphor is an "invitation to see the world anew"; "a way of presenting something as it were something else" (ibid.). This transformative element has also been considered crucial within perezhivane, with a sign or words holding the potential, when 'moved out' into another location, to transform the structure of that situation in accordance with its (i.e., the sign's) content[51]. Such a progressive component was also central to Roth and Jornet's[52] concept of perezhivane, in that it denotes self-movement, to 'something-yet-to-be-determined'[52].

In a recent paper, Veraska and colleagues[53] made the case for using metaphor as a way to counter stress in sports through minimizing the giving of explicit knowledge. Similarly, Vasilyuk's[49] notion of perezhivane also claims a strong affinity to such defensive or coping strategies. However, in agreement with Modell[54] we see something more constructive in using metaphors to change meaning, in that "metaphors not only transfer meaning between different domains, but by means of novel recombinations [they] can transform meaning" itself[54] (p. 1). In this way, they can become 'threshold concepts'[55], capable of "shifting perception and developing insight" leading to a "transformed view of the subject matter and landscape"[56] (p. 12). Use of metaphors then allows fresh perceptions to be developed and existing knowledge to be revitalised; for new impressions to be fostered, and alternative judgements to be formed.

Within sports coaching research, this use of metaphor has been most clearly seen in Jones and colleagues'[8,11,44,57,58] aforementioned conceptualisation of coaching as orchestration. Here, coaching is considered akin to steering a complex social process[44,57]; with the activity itself deemed to be context bound, and characterised by collaboration, struggle and negotiation[58]. Over time, the metaphor has gained increasing traction with coaches seeing themselves and their actions in ever more novel ways. It is to do with changing individuals' frames of reference; to alter their perezhivanyia from something to something else. As argued previously[14], such linguistic practices can help invoke imagination, the ability to envision, and develop previously unconsidered connectivities.

This was also an issue engaged with by Jones and Corsby[33], who postulated that changing or widening coaches' frames of reference from which decisions could alternatively be informed held considerable potential for improving performance (both their own and that of athletes'). According to the sociologist Erving Goffman[59], such frames are akin to brackets that we use to define the meaning and significance of social events. Although potentially limiting, for Goffman, such frames could also be recast as optimistic efforts to encourage another 'reading'; where "something already meaningful in terms of an existing framework is viewed as something else"[33] (p. 446). Here, rules are reinterpreted, thus allowing the possibility for change; in essence for new perezhivanyi.

A dialectical approach

Much of the general confusion and misunderstanding about Vygotsky's work emerges from the adoption of a traditional Cartesian dualism as an epistemological lens through which to view his theories[60]. This was a dualism Vygotsky set out to overcome through proposing a dialectical view of reality. In contrast to the Cartesian fragmentary vision, Vygotsky focused on merging opposing views into a continuous whole to enhance the development of new knowledge and understanding. Development then, could not merely be attributable to the composite of nature and nurture, but was a historically complex phenomenon which "at every stage, reveals the past, which is a part of it"[61] (282–3). Chaiklin[62] (p. 25) further posited this 'dialectical river'

as comprising "different interrelated lines of thought that flow together (i.e., currents and counter-currents)"; that is, as a continuous discourse of ideas from which opportunities emerge to surpass and build upon the existing state of knowledge.

An area of dialectical relations which holds considerable significance for sports coaches is that of concept formation[28]. Being related to communication amongst opposing forces, concept formation was considered to result from an interaction between everyday (spontaneous) concepts and more formal scientific ones. Everyday concepts were considered to occur through experience of direct interaction with the environment; for example, the means of informal learning consistently valued by coaches over and above any formal instruction[63,64,65].

Although accurate in one sense, what such work as cited immediately above may have missed is that understanding results not only from grounded experience, but also from know-how mediated by given scientific concepts. This then is the dialectical relationship leading to overall concept development; i.e., that scientific concepts mediate individual thoughts, hence giving structure to everyday thinking and problem solving[66]. In this way, given knowledge (read as scientific concepts) becomes gradually embedded in everyday coaching referents and vice versa. As Vygotsky explains,

> In working its slow way upward, an everyday concept clears a path for the scientific concept and its downward development… [it] gives it body and vitality. Scientific concepts, in turn, supply structures for the upward development of spontaneous concepts toward conscious and deliberate use. Scientific concepts grow downward through spontaneous concepts; spontaneous concepts grow upward through scientific concepts[67] (p. 194).

The message here for coaches and coach educators is clear; to take care with the concepts and language used to stimulate and facilitate learning. If too much everyday language is used, then no conceptual, trans-locational or transformational thinking is possible; that is, ideas cannot seemingly be applied to different contexts. On the other hand, if too much abstract language is engaged with, there is insufficient attention to, and with, the concrete. The strength of scientific concepts lies in their conscious and deliberate character, whilst spontaneous concepts, on the contrary, are compelling in what concerns the situational and empirical. Both have to be respected and carefully utilised for optimal learning to take place; a conclusion also drawn by Jones, Morgan and Harris[68] when exploring alternative ways of teaching coaching. Here, 'scientific' concepts such power, interaction and performance were presented to coaches to experiment with in their everyday practice, before a subsequent deconstruction and personal theorising of the experience.

Conclusion

The purpose of this paper was to further make the case for the applicability of using the writings of Lev Vygotsky to both deconstruct and guide future coaching practice. In doing so, it marks an attempt to move the conceptualisation of athlete learning along by focusing on how situated improvements to (coaching) practice are, and can be, brought about. The paper can thus be viewed as embedded in on-going efforts to improve coaching practice via policy changes or otherwise. The challenge implicit within the case made is rooted in authentic intellectual and practical concerns, through which new, as opposed to reproduced, practice can be generated[69].

Acknowledging some earlier authors had begun to clear the path, this paper goes further in articulating the nuances within Vygotsky's thinking, while attempting to develop some of his key concepts in relation to sports coaching and associated athlete learning. For example, the emphasis on culture and history permit us to consider the unfolding temporal emergent nature of sports coaching. This allows a critical consideration of the appropriateness of coaching behaviour in the immediate as influenced by social and political formations; something which the vast majority of current research doesn't countenance. Similarly, notions such as the ZPD as articulated, and in particular the role of imitation within it, gives a framework through which we can empirically examine the creative actions and capacities of coaches as more capable others.

It is important to remember, however, that this reconstructive project doesn't extend to a grand theory or gold standard of coaching, but rather of suggested possibilities for action; of tentative recommendations for dealing with the practical realities of the activity. In this respect, we believe the notions presented here hold generative potential for coaches to further develop their facilitative practices. Indeed, engaging with such a perspective marks a more progressive way of putting coach education and coach learning to work. This is because a coach's consciousness, as related to athlete learning, requires forms of 'intellectual understanding'[70]; of the necessity to grasp and further explore the links between social structures, agential action, the force of argument, experimentation, role, and internalisation all within an intersubjective web of others, ideas and objectives over time.

References

1. Jones RL. The sports coach as educator: Re-conceptualising sports coaching. London: Routledge; 2006a.
2. Nelson L, Cushion C, Potrac P, Groom, R. Carl Rogers. Learning and educational practice: Critical considerations and applications in sports coaching. Sport Educ Soc. 2014; 19: 513–531.
3. Culver DM, Trudel P. Clarifying the concept of communities of practice in sport. Int Jour Sport Sci & Coach. 2008; 3(1): 1-10.
4. Cushion CJ. Clarifying the concept of communities of practice: A commentary. Int J Sp Sci & Coach 2008; 3(1): 15-17.
5. Nelson LJ, Cushion CJ. Reflection in coach education: The case of the national governing body coaching certificate. The Sp Psych. 2006; 20: 174–183.
6. Cushion CJ. Reflection and reflective practice discourses in coaching: a critical analysis. Sport Educ Soc. 2016: DOI:10.1080/13573322.2016.1142961.
7. Noddings N. Caring: A feminine approach to ethics and moral education, 2nd edition. Berkeley: University of California Press; 2003.
8. Jones RL, Bailey J, Santos S. Coaching, caring and the politics of touch: A visual exploration. Sport Educ Soc. 2013; 18(5): 648-662

9. Cassidy T, Jones RL, Potrac P. Understanding sports coaching: The social, cultural and pedagogical foundations of coaching practice, 3rd edition. London: Routledge; 2016.
10. Nelson L, Groom R, Potrac P. Learning in sports coaching: Theory and application. London: Routledge; 2016.
11. Jones RL, Ronglan LT. What do coaches orchestrate? Unravelling the 'quiddity' of practice. Sport Educ Soc. 2017: DOI: 10.1080/13573322.2017.1282451
12. Potrac P, Nelson L, Groom R, Greenough K. Lev Vygotsky: Learning through social interaction. In: Learning in sports coaching: Theory and application. Abingdon, Oxon, Routledge; 2016. p. 101-112.
13. Jones RL, Edwards C, Viotto Filho IAT. Activity theory, complexity and sports coaching: An epistemology for a discipline. Sport Educ Soc. 2016; 21(2): 200-216.
14. Jones RL, Thomas GLl. Coaching as 'scaffolded' practice: Further insights into sport pedagogy. Sp Coach Rev. 2015; 4(2): 65-79.
15. Jones RL, Thomas G, Felix T, Viotto Filho T, Edwards C. Yrjö Engeström. In: Learning in sports coaching: Theory and application. Abingdon, Oxon, Routledge; 2016. p. 113-122
16. Potrac P, Cassidy T. The coach as a 'more capable other'. In: The sports coach as educator: Re-conceptualising sports coaching. Abingdon, Oxon, Routledge; 2016. p. 39-50
17. Wood D, Bruner JS Ross G. The role of tutoring in problem solving. J Child Psych Psych. 1976; 17: 89-100.
18. Flyvbjerg B. Making social science matter: Why social inquiry fails and how it can succeed again. Cambridge: Cambridge University Press; 2001
19. Hemmestad LB, Jones RL, Standal ØF. Phronetic social science: A means of better researching and analysing coaching? Sport Educ Soc. 2010; 15(4): 447-459.
20. Crossley N. Towards relational sociology. London: Routledge; 2011.
21. Vygotsky LS. Mind in society: The development of higher psychological processes. Cambridge MA: Harvard University Press; 1978.
22. Daniels H. Vygotsky and pedagogy. London: Routledge; 2001.
23. Wertsch J. Vygotsky and the social formation of mind. UK: Harvard University Press; 1985
24. Hasan R. Semiotic mediation and mental development in pluralistic societies: Some implications for tomorrow's schooling. In: Learning for Life in the 21st century: Sociocultural perspectives on the future of education. Oxford: Blackwell; 2002. p. 112–126.
25. Leont'ev A. Activity, consciousness and personality. Englewood Cliffs, NJ: Prentice Hall; 1978.
26. Corsby C. Garfinkel, competence and contingency: Respecting the codes of practice. Unpublished PhD thesis, Cardiff Metropolitan University, Cardiff, UK; 2017.
27. Chaiklin S. The zone of proximal development in Vygotsky's analysis of learning and instruction. In: Vygotsky's educational theory and practice in cultural context. Cambridge: Cambridge University Press; 2003. p.39-64.
28. Vygotsky L. Thinking and speech (N. Minick, Trans.). In: The collected works of L.S. Vygotsky. Vol. 1. Problems of general psychology. New York: Plenum Press. 1987. p.39-285.
29. Palinscar AS. Keeping the metaphor of scaffolding fresh – A response to C.Addison Stone's 'the metaphor of scaffolding: Its utility for the field of learning disabilities'. J Learn Dis. 1998; 31(4): 370-373.
30. Vygotsky L. The problem of age (M. Hall, Trans.). In: The collected works of L.S. Vygotsky. Vol. 5. Child Psychology. New York: Plenum Press. 1998. p.187-205.
31. Vygotskty LS. Obras escogidas IV. Traducción de Lidia Kuper. Madrid: Visor, 1996.
32. Vygotsky L. The collected works of L.S. Vygotsky Vol. 4. The history of the development of higher mental functions. New York: Plenum Press, 1997.
33. Jones RL, Corsby C. A case for Coach Garfinkel: 'Decision making' and what we already know. Quest. 2015. 67(4): 439-449.
34. McCarthy ED. Knowledge as culture: The new sociology of knowledge. London: Routledge, 1996.
35. Mason J. Researching your own practice: The discipline of noticing. New York: Routledge, 2002.
36. Jones RL, Bailey J, Thompson I. Ambiguity, noticing, and orchestration: Further thoughts on managing the complex coaching context. In: The Routledge handbook of sports coaching. London: Routledge; 2013. p.271-283.
37. Ronglan LT, Havang Ø. Niklas Luhman: Coaching as communication. In: The Sociology of Sports Coaching, Abingdon: Routledge, 2011.
38. Dewey J How we think: A restatement of the relation of reflective thinking to the educative process. Boston: Houghton Mifflin, 1910.
39. Bransford J, Brown A, Cocking R. How people learn: Brain, mind, experience and school. Washington, DC: National Academy Press, 2000.
40. Madison DS. Critical ethnography: Methods, ethics and performance. Thousand Oaks: Sage, 2005.
41. Denison J, Mills JP, Konoval T. Sports' disciplinary legacy and the challenge of 'coaching differently'. Sport Educ Soc. 2015 doi:10.1080/13573322.2015.1061986
42. Touraine A. The voice and the eye: An analysis of social movements. Cambridge: University press, 1981.
43. Westwood S. Power and the social. London: Routledge, 2002.
44. Jones RL, Wallace M. Another bad day at the training ground: Coping with ambiguity in the coaching context. Sport Educ Soc. 2005; 10(1): 119-134.
45. Blunden A. Perezhivanie: From the dictionary of psychology. Mind, Cult Act. 2016; 23(4): 272-273.
46. Clarà M. Vygotsky and Vasilyuk on Perezhivanie: Two notions and one word, Mind, Cult Act. 2016; DOI: 10.1080/10749039.2016.1186194
47. Toassa G. Emoções e vivências em Vigotski: investigação para uma perspectiva histórico-cultural.São Paulo. Tese [Doutorado em Psicologia] – Instituto de Psicologia, Universidade de São Paulo, 2009.
48. Vygotsky LS. The problem of the environment. In: The Vygotsky reader Cambridge, MA: Blackwell; 1994. p. 338–354.
49. Vasilyuk F. The psychology of experiencing: An analysis of how critical situations are dealt with (R. English, Trans.). Moscow, Russia: Progress, 1984/1988.
50. Barret F, Cooperrider D. Generative metaphor intervention: A new approach for working with systems divided by conflict and caught in defensive perception. J App Beh Sci. 1990; 26(2): 219-239.

51. El'konin BD. Vvedenie v psixologiju razvitija: B tradicii kul'turno-istoričeskoj teorii L. S. Vygotskogo [Introduction to the psychology of development: In the tradition of the cultural-historical theory of L. S. Vygotsky]. Moscow, Russia: Trivola, 1994.
52. Roth W-M, Jornet A. Perezhivanie in the light of Vygotsky's later Spinozist turn. Mind, Cult Act. 2016; 23(4): 315-324.
53. Veraksa AN, Gorovaya AE, Leonov SV. The possibility of using sign and symbolic tools in the development of motor skills by beginning soccer players. Psychology in Russia: State of the Art, 2012.
54. Modell A. Metaphor – the bridge between feelings and knowledge. Psych Inq. 2009; 29: 6-17.
55. Meyer JHF, Land R. 'Threshold concepts and troublesome knowledge (1): Linkages to ways of thinking and practicing within the disciplines', Improving students learning: Ten years on, Oxford: OCSLD, 2003.
56. Jones RL. How can educational concepts inform sports coaching? In: The sports coach as educator: Re-conceptualising sports coaching. London, Routledge; 2006b. p. 3-13.
57. Jones RL, Wallace M. The coach as orchestrator. In: The sports coach as educator: Re-conceptualising sports coaching. London, Routledge; 2006b. p. 51-64.
58. Santos S, Jones, RL, Mesquita I. Do coaches orchestrate? The working practices of elite Portuguese coaches. Res Quart Ex Sp. 2013; 84(2): 263-272.
59. Goffmann E. Frame analysis: An essay on the organization of experience. New York: Harper and Row, 1974.
60. Liu CH, Matthews R. Vygotsky's philosophy: Constructivism and its criticisms Examined. Int Educ J. 2005; 6(3): 386-399.
61. Vygotsky LS. The collected works of L.S. Vygotsky: The fundamentals of defectology: Abnormal psychology and learning disabilities. (Vol. 2). New York: Plenum Press. (Original work 1928—1933). 1993. P. 292-293.
62. Chaiklin S. Dialectics, politics and contemporary cultural-historical research, exemplified through Marx and Vygotsky. In: Vygotsky and sociology. London. Routledge; 2012. p. 24-43.
63. Piggott D. Coaches' experiences of formal coach education: a critical sociological investigation. Sport Educ Soc. 2012; 17(4): 535-554.
64. Cushion CJ, Armour KM, Jones RL. Coach education and continuing professional development: experience and learning to coach. Quest. 2003; 55: 215-230
65. Côté J. The development of coaching knowledge. Int J Sport Sci Coach. 2006; 1(3): 217-222.
66. Karpov Y. Development through the life span: A neo-Vygotskian perspective. In: Vygotsky's theory of education in cultural context. New York: Cambridge University Press. 2003.
67. Vygotsky LS. Thought and language. Kozulin edition. (pp. 194), Cambridge, MA: MIT Press. 1986.
68. Jones RL, Morgan K, Harris K. Developing coaching pedagogy: Seeking a better integration of theory and practice. Sport Educ Soc. 2012; 17(3): 313-329.
69. Boud D, Tennant M. Putting doctoral education to work: Challenges to academic practice. HERD. 2006; 25(3): 293-306.
70. Noble G, Watkins M. So, how did Bourdieu learn to play tennis? Habitus, consciousness and habitation. Cult Stud. 2003; 17(3/4): 520-538.

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