LEARNING ENVIRONMENTS FOR HELPING COACHES AND OTHER KEY STAKEHOLDERS INCLUDE LIFE SKILLS IN THEIR PRACTICE

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Much has been written on positive youth development (PYD) through sport in the last decade (Holt et al., 2017). Researchers, especially in the field of sport psychology, have conducted reviews of the literature (e.g., Camiré, 2014; Holt et al., 2017; Sendak, Schilstra, Tye, Brotkin, & Maslow, 2018) to keep track of this productivity and have proposed many models or frameworks (e.g., Bean, Kramers, Forneris, & Camiré, 2018; Gould & Carson, 2008; Hodge, Danish, & Martin, 2012; Jacobs & Wright, 2018; Newman, Kim, Alvarez, & Tucker, 2018; Pierce, Gould, & Camiré, 2017; Turnnidge & Côté, 2017; Whitley, Massey, & Wilkinson, 2018). Each model or framework has generally been developed to bridge a gap left by others but it can be argued that any model or framework on PYD, given its complexity, will provide only part of the explanation.

Life skills (LS), a concept that falls under the umbrella of PYD (Holt et al., 2017), has been of particular interest in youth sports as it is viewed as "those internal personal assets, characteristics, and skills such as goal setting, emotional control, self-esteem, and hard work ethic that can be facilitated or developed in sport and are transferred for use in non-sport settings" (Gould & Carson, 2008, p. 60). Therefore, an essential element to consider when addressing LS is the notion of transfer. Using the sport psychology literature, Pierce et al. (2017) suggested the following definition of LS transfer:

> *The ongoing process by which an individual further develops or learns and internalises a personal asset (i.e., psychosocial skill, knowledge, disposition, identity construction, or transformation) in sport and then experiences personal change through the application of the asset in one or more life domains beyond the context where it was originally learned. (p. 194)*

Four aspects drawn from the more recent literature on LS are of particular interest in this chapter on the learning environment needed to help youth sport coaches and other key stakeholders include LS in their practice. First, Turnnidge, Côté, and Hancock (2014) suggested that there are two approaches—implicit and explicit—to LS transfer. Generally, programs employing an implicit approach "focus on developing sport-specific outcomes, but do not deliberately frame these outcomes as transferable skills". Programs employing an explicit approach focus on "creating an environment in which the transferability of skills is explicitly taught by program leaders" (p. 205). Bean et al. (2018) extended Turnnidge et al.'s (2014) work by presenting an implicit/explicit continuum of LS development and transfer composed of six levels: (a) structuring the sport context, (b) facilitating a positive climate, (c) discussing LS, (d) practicing LS, (e) discussing transfer, and (f) practicing transfer. Because coaches are considered the main actors in youth sport (Gould & Carson, 2008; Vella, Oades, & Crowe, 2011) and because many of them believe that LS transfer is implicit (and/or find it difficult to explain how they teach it), formal LS training programs have been proposed along with lists of coaching strategies in this regard (e.g., Newman et al., 2018; Pierce, Kendellen, Camiré, & Gould, 2018). It is expected that, equipped with this new information, coaches will deliberately and systematically teach

LS and their transfer while coaching to help foster the optimal development of athletes (Bean et al., 2018).

Second, youth sport is composed of many contexts and "one limitation of current research is that sport is often described as a single entity" (Camiré, 2014, p. 496). Contexts like sport summer camps (e.g., Garst, Browne, & Bialeschki, 2011; Povilaitis & Tamminen, 2018), after-school sport programs for at-risk/underserved youth (e.g., Allen, Rhind, & Koshy, 2015; Daud, & Carruthers, 2008), high school sport (e.g., Camiré, 2014; Holt, Tink, Mandigo, & Fox, 2008), and community sport (e.g., Gould, Collins, Lauer, & Chung, 2007; Trottier, & Robitaille, 2014) have different missions and actors, and the priority given to LS and the teaching approaches will vary. Researchers have discussed how the competitive aspect inherent to the practice of traditional sports targeting performance influences the way LS and their transfer are/should be promoted (e.g., Camiré, 2015; Heeren & Requa, 2001; Holt et al., 2017). Unfortunately, very limited number of studies have examined PYD in a traditional sport setting, where talent development and competition, rather than teaching LS, are the main objective (Whitley, Massey, & Leonetti, 2016).

Third, as previously mentioned, a skill must be transferred to another context to be considered a life skill. Jacobs and Wright (2018, p. 89) suggest considering "how different the environments are between the initial learning context (e.g., sport setting) to where future application of life skills will take place (e.g., school, home, community)". They contrast *near transfer* with *far transfer*. In near transfer, similarities between the contexts will facilitate the transfer process. For example, a skill learned when practicing an activity in a specific organized sport (e.g., control of emotion) can be transferred to another organized sport. In far transfer, the contexts are less similar, and transfer is thus more difficult because it entails higher levels of thinking skills, metacognition, and an ability to generalize learned concepts. The transfer of emotional control from a sport setting to the classroom would be an example of far transfer. Thus, we can assume that in far transfer, the people involved in the different contexts will be less similar than in near transfer contexts and that their perspectives on the importance and manner of teaching LS and their transfer will vary.

Fourth, Jacobs and Wright (2018) argued that past research in sport-based youth development has disregarded the cognitive processes through which students apply the lessons learned in a sport program to settings outside the program. These authors seem to support Pierce et al.'s argument that we can better understand life skills development and their transfer by using general education theories and "that the individual learner must be considered at the core of the transfer process and that the potential for transfer resides within the learner" (2017, p. 194).

Considering the points mentioned so far and the fact that "what happens between the start of a program and a student eventually making use of life skills outside the program is often overlooked in the research" (Jacobs & Wright, 2018, p. 95), the main goal of this chapter is to use a constructivist view of learning to map the learning environment needed to help youth sport coaches and other key actors teach LS in a competitive high school sport context and to foster their transfer to the school context. To do so, we will first present a constructivist view of learning through the work of two well-known authors in the field of learning and adult education: Peter Jarvis and Jennifer Moon. We will also provide definitions of several key terms, considering that "some of the difficulties with understanding the processes of learning and

teaching may be due to missing words in the language" (Moon, 2004a, p. 13). Second, using Jarvis and Moon's work and the literature on high school sports, we will draw a map to provide a visual representation of the learning environment for this specific competitive youth sport context and the school context for transfer. Finally, based on an ongoing project, we will share the procedure and the challenges in designing and implementing a program to help youth sport coaches and other key stakeholders include LS in their practice.

A CONSTRUCTIVIST VIEW OF LEARNING BASED ON JARVIS' AND MOON'S WORK

We chose to base this view of learning on the work of Peter Jarvis and Jennifer Moon because they both discuss the learning process using the constructivist approach, and their work is complementary. Furthermore, we are familiar with their work, having recently written a book chapter on Jarvis (Trudel, Culver, & Richard, 2016) and having published an article linking Moon's generic view of learning to coach development (Werthner & Trudel, 2006). We have also used their work in many of our studies (e.g., Callary, Werthner, & Trudel, 2012; Paquette, Hussain, Trudel, & Camiré, 2014; Trudel, Culver, & Werthner, 2013).

JARVIS' LIFELONG LEARNING THEORY

Peter Jarvis is an internationally renowned expert in the field of adult learning, and his work has influenced the research in sport coach development (e.g., Duarte & Culver, 2014; Nelson, Cushion, & Potrac, 2006). For him, "Learning is the process of being in the world". He believes that "at the heart of all learning it is not merely what is learned, but what the learner is becoming (learning) as a result of doing and thinking – and feeling" (2006, p. 6). Therefore, learning should not be restricted to what happens in the classroom but should include all learning opportunities (incidental and purposeful), also called episodic experiences. His constructivist view of learning is reflected in his definition of lifelong learning:

> *The combination of processes throughout a lifetime whereby the whole person – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, meaning, beliefs and senses) – experiences social situations, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the individual person's biography resulting in a continually changing (or more experienced) person. (p. 134)*

According to this definition, LS learning and transfer can contribute to the lifelong learning journey of a young person progressively becoming a responsible adult citizen. It can be argued that it will also contribute to the coaches' and other actors' lifelong learning journey.

Life-world and wider world/society. Learning is considered an individual process, happening in a social context as perceived and defined by the individual. This is his/her life-world. Because a life-world includes interactions between three elements – space, time, and culture – we can have more than one life-world, which can all overlap (work, family, sport, etc.). Life-worlds are the familiar situations where "we learn to fit in and we adjust our behaviour accordingly in relationship to those others with whom we interact" (Jarvis, 2009, p. 13). However, because of globalization and advances in technology, people's life-worlds tend to be less static than in the past. However, this tendency will depend also on the individual's

capacity and desire to accept new ways of doing things, which are often suggested by people or organizations outside his/her life-world, that is, the wider world/society.

Biography. An individual's biography comprises everything that the individual has already learned (cognitive, emotive, and physical dimensions). The biography plays a very important role in the learning process because it will influence how the individual approaches any new learning situations (accept, resist, reject, etc.).

Harmony and disjuncture. Harmony is when we feel comfortable with our life-world, when everything seems familiar and we are on 'cruise control'. Conversely, disjuncture occurs "when our biographical repertoire is no longer sufficient to cope automatically with our situation, so that our unthinking harmony with our world is disturbed and we feel unease" (Jarvis, 2006, p. 16). Here, we might ask, for instance, 'What should I do?' or 'What does that mean?'. In response, we can decide either not to act or to work at finding the answer/solution and thereby establishing, or re-establishing, harmony. Those who constantly avoid disjuncture can be called "harmony seekers" (p. 26).

These key concepts – life-worlds, biography, and harmony and disjuncture – are all linked, and if we want to learn to do things differently in a specific context (e.g., youth sports), people around us will also have to change because those with "whom we interact are also being changed through their learning, so that the interpersonal relationships between people in the world are always dynamic; there is always the potential for disjuncture and, through interaction, learning will keep on occurring" (p. 26).

MOON'S APPROACH TO SHORT COURSES AND WORKSHOPS

Jennifer Moon is an established researcher in education, health, and professional development in higher education. She recently discussed how her view of learning, and more specifically the application of reflective practice, could be part of coach training during short courses or workshops (Moon, 2016). For her, a constructivist view of learning is when "the learner constructs their own knowledge and the knowledge is conceived to be organized more as a network" (Moon, 1999, p. 106). She explains that "what is already known is employed in guiding the new learning in organizing the process of assimilation (taking in the material of learning)" and that "in meaningful learning, where the learner intends to understand the material of learning instead of just memorizing it, the learner accommodates or adapts an area of the network in response of the new learning" (p. 106).

Moon's reflection (Moon, 2001, 2004b, 2016) on learning in short courses or workshops is of particular interest because coach training is often delivered over a few hours or days due to time and money constraints (Vargas-Tonsing, 2007; Winchester, Culver, & Camiré, 2013). She (2001) argues that short courses and workshops can be a waste of time and money if they (a) are removed from coaching contexts, (b) are based on the assumption that what is taught is learned, and (c) have no real impact on the participants' practice.

Cognitive structure (similar to biography). Cognitive structure "has been used as a convenience to describe the network of knowledge and understanding and associated feeling or emotion – 'what is known' by the learner at a particular time… it guides what we choose to pay attention to, what we choose to learn and how we make meanings of the material of learning or how we modify what we know or feel already" (Moon, 2004a, p. 17).

Cognitive dissonance (similar to disjuncture). Cognitive dissonance is used "to describe the – often uncomfortable situations – in which new material of learning is in conflict with the learner's cognitive structure" (Moon, 2004a, p. 19).

Teaching and learning material. Teaching material is what the instructor teaches and learning material is what the learner learns. For example, when an instructor presents the same material to a group of coaches attending a workshop, the material that will be learned might diverge from one learner to another because of the learner's motivation, for instance, or missing part of the teaching (arriving late, looking at cell phone, etc.).

Learner's approach to learning: Surface learning and deep learning. The expressions of surface learning and deep learning are important in Moon's work. Surface learning is when learners have little intention of investing the time and effort. Their main concern is to cope with the course requirements and, at best, passively absorb what is presented and be able to replicate it if asked. Deep learning means that "the individuals will have a commitment to understanding, to making meaning, to linking the current ideas to previous ideas and knowledge" (Moon, 2001, p. 147). The two approaches are linked to five learning stages: (a) noticing, (b) making sense, (c) making meaning, (d) working with meaning, and (e) transformative learning. These stages represent different levels of complexity in the processing of the learning material. Although considered surface learning, the first two stages (noticing and making sense) are crucial and are the prelude to deeper learning. **Noticing** "is a first 'gatekeeping' stage when the cognitive structure guides and organizes the input of the material of learning on the basis of expectations and previous experiences" (p. 71). Because coaches have different cognitive structures (education, athletic experiences, etc.), their willingness to attend a course or workshop will vary. Therefore, instructors are responsible for directing the learners' attention towards the lessons that should or could be learned. In the **making sense** stage, learners attempt to group ideas based on superficial similarities unrelated to previous knowledge. It can be described as "Reproduction of ideas, ideas not well linked" (p. 72). In these two stages, learning is an assimilation process, the absorption of ideas without changing one's cognitive structure. In the next three stages, learning is an accommodation process, ideas deeply linked to existing understanding. In the **making meaning** stage, "ideas are now linked together and there is some evidence of a holistic view of the learning" (p. 73). The next two stages (working with meaning, transformative learning) are somewhat different from making meaning in that they may take place separately from the original learning material. The learner's cognitive structure has changed during the making meaning stage, and it is with the updated cognitive structure that the learner may look for external resources including other people. The learner is thus able to provide explanations based on the lessons learned. Finally, in the **transformative learning** stage, the learner has the ability to "step outside her own and others' processes of reasoning" and "to take a critical overview of knowledge and of her own knowledge and function relation to it" (p. 75). In brief, this means that, in short courses, learners must attain a depth of learning that enables them to explain the subject to another person.

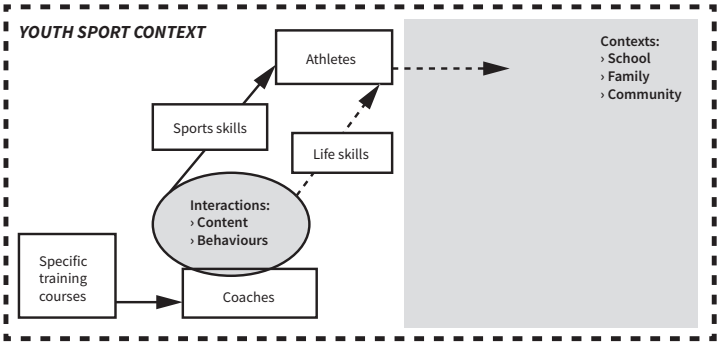
MAPPING THE LEARNING ENVIRONMENT OF A COMPETITIVE YOUTH SPORT CONTEXT

The use of visual representation as a tool for learning and knowledge-sharing is well documented in the literature (Bordan, 2018; Kinchin, 2014). Also documented are various methods with their own usage specificities, which are often presented as non-negotiable (Eppler, 2006).

Nonetheless, some authors (e.g., Davies, 2011; Eppler, 2006) argue that it can be advantageous to combine the strong points of different mapping methods to obtain a more flexible, adapted mapping tool. For our needs, we combined two well-known tools: mind mapping and conceptual diagram. Mind mapping is recognized for its flexibility, the ease with which elements can be moved and reorganized, the use of colour to differentiate trends/contexts, etc. In this chapter, we will draw three maps to show the similarities and differences between contexts and will use grey shading to differentiate them. Mind mapping is particularly useful for researching and consolidating information from several sources (Bordan, 2018). In the maps we created, the elements and their links originate from the extensive literature on LS. Another key feature of mind mapping is to have the investigated topic at the center of the map. Because coaches are often considered the most influential people in LS teaching and transfer (Pierce et al., 2017), coach-athlete interactions will be at the core of the maps presented in this chapter (darker lines). We chose not to use radiating lines, a key characteristic of mind mapping. Instead, we borrowed from the conceptual diagram approach and used pre-defined category boxes filled with text based on the literature (Eppler, 2006). In a conceptual diagram, the boxes are linked with arrows to show specific interactions. However, because all the components in the maps are in interactions, we preferred not to link them with arrows because that would have made the maps unreadable. The few arrows used highlight the coach-athlete interactions, the core of the maps.

A SIMPLISTIC REPRESENTATION OF LIFE SKILLS TEACHING AND TRANSFER

Map 1 illustrates the linear process of LS teaching and transfer that is often assumed by people who are unaware of the complexity of these processes. The map can be read as follows: coaches, through their planning and interactions during training sessions and competitions, provide a context where their athletes learn the skills specific to their sport and, often unconsciously, also the LS (dashed line) that they will use in other contexts, such as school (implicit transfer). To maximize the chances for transfer, LS should be deliberately planned and taught (explicit transfer). Because coaches are rarely exposed to material that is relevant to PYD in their mainstream coach education programs (Santos et al. 2017), specific training courses/workshops are developed. At the end of these formal courses, often delivered over a few hours, coaches should 'know what to do'. In sum, this type of training event is based on the assumption that "what is taught is learnt or that the subject matter of training is learnt without modification by the learner other than as erosion or distortion of memory" (Moon, 2004a, p. 13).



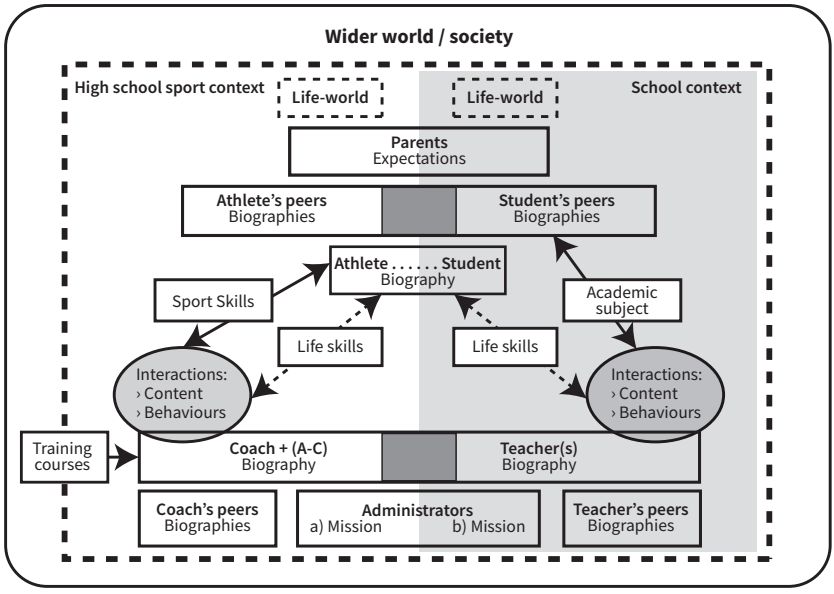
Map 1. The linear process of the teaching and transfer of life skills.

Considering some of the key principles of a constructivist view of learning, as defined through the work of Jarvis and Moon, LS might mean different things for different people. LS such as self-confidence, discipline, or concentration are examples of difficult-to-define concepts that increase the likelihood of a 'negotiation of the meaning' among the actors. Thus, the linear process, as presented in Map 1, is a too simplistic and even naïve representation of how LS are taught, learned, and used (Coakley, 2016; Petitpas, Van Raalte, Cornelius, & Presbrey, 2004; Pierce et al., 2017).

Many researchers (e.g., Hayden et al., 2015; Holt et al., 2017; Whitley et al., 2018) have highlighted that LS learning and transfer is a complex process involving many actors. Therefore, coaches must attempt to collaborate with parents, educators and other adult leaders to encourage youth to practice the LS developed in sport in other settings like at home, at school, and in the community (Camiré, 2015). Indeed, the people surrounding the coaches and the youth are often perceived as facilitators, moderators, or even barriers, but are rarely perceived as learners who will contribute to the negotiation of the meaning of LS.

THE LEARNING ENVIRONMENT OF A HIGH SCHOOL SPORT CONTEXT

Several of the studies concerning sport contexts have investigated the high school sport context. In 2014, Camiré found 28 empirical studies on North American high school sports conducted between 1999 and 2013. Some key studies have since followed (e.g., Aoyagi et al., 2016; Camiré, 2015; Hayden et al., 2015; Kendellen & Camiré, 2017; Sackett, & Gano-Overway, 2017; Santos et al., 2018; Trottier & Robitaille, 2014). Although high school sport contexts vary in structure (Hayden et al., 2015), they are generally defined as sport contexts for boys and girls between the ages of 14 and 18 years where sports are "practiced outside regular school hours" and "teams participate in competitive and organized interscholastic leagues that lead to annual regional and state/provincial championships" (Camiré, 2014, p. 496).



Map 2. Learning environment: high school sport context to school context.

Map 2 is an attempt, based on the literature, to represent the dynamic learning environment that can prevail when student-athletes are expected to learn LS in a high school sport context and to transfer them to the school context. We can argue that, contrary to family and community contexts, the school context is a type of 'near transfer' (Jacobs & Wright, 2018) because high school sport can be seen as an extension of the school given that (a) each high school sport team represents its school, (b) most educational and sport activities happen in the same building, (c) many key adults (coaches, teachers, administrators, parents) are linked to both contexts, and (d) they have similar missions (Holt et al., 2008). When interpreting this map, readers must focus on how each actor, as a learner, can participate in the negotiation of the meaning of LS, in other words, how they learn and contribute to the learning of others.

Compared with Map 1, details have been added to the core of the map (darker components). First, the coach's biography will influence his/her (a) willingness to attend training courses, (b) level of disjuncture/cognitive dissonance created by the content presented, and (c) learning level (surface or deep learning). In most teams, there are other members of the coaching staff, such as assistant coaches (A-C), each with their own biography. Thus, if the head coach is the only one attending the training courses/workshops, the coaching staff may have difficulty agreeing on how to deliberately plan LS teaching and transfer. Second, student-athletes have their own biography, including, for instance, their maturity level and ethnicity, that influence their readiness to invest time in learning LS. The arrows pointing in both directions represent the interactions, that is, the negotiation process, between the student-athletes and the coaching staff.

Coaches and their athletes do not live in a vacuum and, because of the transfer component of LS, other actors (e.g., other coaches, administrators, teammates, family) are part of their life-world, or sometimes their life-worlds, and influence the transfer. First, coaches have peers whom they meet at competitive events. However, the likelihood of discussing LS with other teams' coaches seems minimal considering that their peers may not be familiar with LS and that communications between coaches tend to be superficial given the competitive atmosphere that prevails. Second, high school administrators propose mission statements for both the academic and the sport departments. If the school principal was a former physical education teacher (biography), he/she will more likely have a strong, positive opinion about high school sport. Generally, both mission statements stress the importance of using a holistic approach to prepare youth for the future. Unfortunately, not all coaches are aware of these mission statements, and the level of awareness decreases progressively from coaches to parents to athletes. Third, student-athletes would likely find it easier to discuss LS with their teammates than with their schoolmates because many of them would not have received information about LS and transfer. Fourth, parents have strong expectations regarding school success and may have discussions with their child about the importance of both sport and academics. Fifth, teachers have a clear mandate to deliver a curriculum (math, history, etc.) that does not include LS per se. Their readiness to take time to discuss LS will vary and will probably be stronger for the few teachers who are also coaches.

The two life-worlds are influenced by organizations from the wider world/society that suggest or impose regulations that can have an impact on LS teaching and transfer. For example, we are aware of a high school sport federation that imposes a three-month season per sport. The main reason is to give student-athletes the opportunity to practice different sports/motor skills.

Another high school sport federation restricts student-athletes to only one sport per school year. This is to avoid having the school represented by only the most skilled athletes at every sporting event. The rule also supports the argument that having a long-term engagement with the same coach is more effective for learning LS. Another example of organizations that influence sport coaching and specifically coaches' development is the International Council for Coaching Excellence (ICCE). This organization recently published such documents as the *International Sport Coaching Framework* (2013), the *International Coach Developer Framework* (2014), and the *ICCE Standards for Higher Education Sport Coaching Bachelor Degrees* (2016).

With Map 2, we wanted to illustrate the complexity of LS teaching and transfer. To maximize the chances of youth transferring LS from high school sport to the academic context, the coaches, their athletes, and other actors involved must be given opportunities to learn how to foster this process, that is, to negotiate the meaning.

CREATING A LEARNING ENVIRONMENT TO OPTIMIZE LIFE SKILLS TEACHING AND TRANSFER

Most youth sport coaches (high school and community) are volunteers and may or may not have a coach certification delivered by a national governing body or sport federation. When required, the main objective of the certification is to provide coaches with a certain amount of knowledge to coach a specific sport. However, any certification attests only that the coach learned a specific amount of material at a specific moment. Thus, continuous professional development in the form of short courses and workshops is a way to keep abreast of the latest knowledge on coaching. Because content related to LS teaching and transfer is rarely included in formal coach education programs, some researchers have suggested modifying these programs to include content related to PYD and LS (e.g., Santos, Camiré, & Campos, 2016). Other researchers have developed interventions to better equip coaches to teach LS and their transfer (e.g., Falcão, Bloom, & Bennie, 2017; Falcão, Bloom, & Gilbert, 2012; MacDonald, Côté, & Deakin, 2010; Sackett & Gano-Overway, 2017). In a pilot study, Strachan, MacDonald, and Côté (2016) developed an online tool called Project SCORE, where, over the course of a season, coaches were asked to deliver 10 lessons on various topics relating to LS, such as goal setting, respect, and fair play. The results of this study are interesting because they show that coaches, as learners, decided what they wanted to learn and negotiated what was presented to them. However, from the eight coaches recruited, only four completed the program. Those who did complete it mentioned using additional personal resources besides the proposed material to further their learning and taking a more deliberate approach to deliver the content to their athletes.

Another study reported on an LS training program for athletes. Hardcastle, Tye, Glassey, and Hagger (2015) tested a program for high-performance athletes called 'Developing Champions'. The objective was to develop transferable life skills such as goal setting, problem solving, time management, and coping with pressure. Trained facilitators delivered the program through lectures, seminars, and accessible material. Some results are noteworthy. First, in a few seminars, older elite athletes were invited to present some of the content, and the participants tended to be more receptive than when the regular facilitators presented the material. This illustrates the importance of having a learning environment that gives athletes the opportunity to discuss these issues with their peers. Second, although the coaches were invited to participate in the workshops, most chose not to, in other words, refused to experience disjuncture.

Many researchers (e.g., Danish, Forneris, & Wallace, 2005; Hardcastle et al., 2015; Hayden et al., 2015; Martinek, & Lee, 2012; Newman et al., 2018; O'Neil, Allen, & Calder, 2013; Santos et al., 2018; Strachan, Côté & Deakin, 2011) in the field of PYD have stressed the importance of having better collaboration among all the actors involved. Merkel (2013, p. 157) suggests that "Changing the future of youth sports for the better needs a collaborative effort between parents, coaches, teachers, health professionals, community leaders, and politicians". However, the process to achieve this is far from obvious. A frequently suggested strategy is to ask coaches to present their coaching philosophy early in the season to help inform parents and garner their support (Santos et al., 2018). Although this face-to-face meeting is undoubtedly important, time restrictions and the numerous topics to be addressed preclude open discussion and the negotiation of meanings. If not integrated into a larger strategy, parents can perceive the coaches' messages as a 'laundry list' of dos and don'ts (Trudel & Gilbert, 2004).

ONGOING PROJECT

A few years ago, the principal of a high school with a school sport program contacted our research group asking for help in the development of their sport coaches. After a few meetings, it became obvious that the principal was expecting more than a quick workshop. He was looking for a sustainable program that would promote the holistic development of student-athletes and that would include LS teaching and transfer. Our research group proposed to use participatory action research. For Kemmis and McTaggart (2005), participatory action research aims to solve a concrete problem experienced by the group of study participants, to ultimately bring about a change of practices in a social environment. The process of participatory action research generally involves a spiral of self-reflective cycles of planning, acting, observing, and reflecting throughout which adjustments are made in light of the lessons learned from experience. This research strategy was chosen to encourage collaboration with the selected school to implement an LS teaching and transfer training program. Several researchers (e.g., Enright & O'Sullivan 2012; Holt, Scherer, & Koch, 2013) have highlighted the relevance and effectiveness of participatory action research, especially for intervening within the sport setting and on the field with children or adolescents.

For our research group, we hypothesized that any LS teaching material presented to learners will make sense to them if it (a) provides information on a limited number of LS, (b) is practical and easy to integrate in the coaches' and teachers' routine, (c) is based on the needs of the coaches, the teachers, the student-athletes, and other school stakeholders, (d) is easily accessible to all school stakeholders to facilitate interactions and discussions, and (e) is implemented longitudinally and seen as a complement to what is already offered or requested in terms of coach certification and development or teacher training.

Below, we first provide details of the LS teaching and transfer program that is currently being implemented during the participatory action research. In addition, we present the challenges faced.

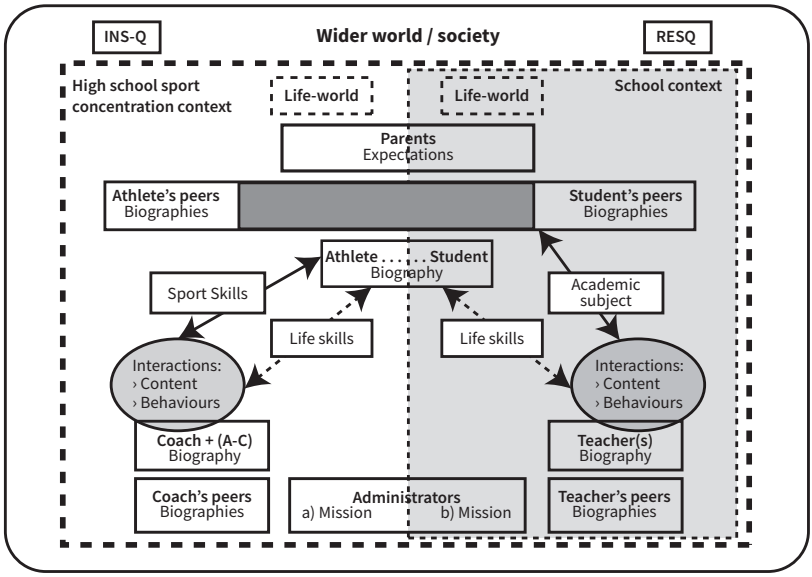
HIGH SCHOOL SPORT CONCENTRATION CONTEXT

Generally, high school sport concentration programs are a type of high school sport setting where student-athletes have a greater number of periods reserved to practice their sport. This

participatory action research was conducted in collaboration with a school with sport concentrations in Quebec City (Canada). The school in question is a high school with 1,045 students aged from 12 to 17 of whom more than half participate in an interscholastic competition sport of the Réseau du sport étudiant du Québec (Quebec Student Sport Network [RSEQ]). The school has a local program allowing student-athletes to have more periods reserved for the practice of various sports without, however, being referred by a sport federation. The approximate number of hours per year that the student-athletes practice sports is 135 in Secondary I and II, 112 in Secondary III, and 90 in Secondary IV and V. The school has seven full-time main coaches who are assisted by approximately 50 part-time coaches. Finally, the school has a total of 55 teachers from Secondary I to Secondary V.

Map 3 was developed based on this high school sport concentration context and on the results of studies conducted in school contexts where sport practice occupies an important part of the student-athletes' life (e.g., Aquilina, 2013; Camiré, Trudel, & Bernard, 2013; Gledhill & Harwood, 2015; Knight & Harwood, 2015; O'Neill et al., 2013; Ronkainen, Ryba, Littlewood, & Selänne, 2018).

Let us start with a description of the core of Map 3. A key element of coaches' biographies is their expertise in one sport, which is often the main criterion for their selection of a sport. For this reason and because they meet with their athletes almost daily, these coaches rarely occupy a teaching position, and their coaching position is either full- or part-time.



Map 3. Learning environment: high school sport concentration context to school context.

The particularity of the context in Map 3 is that the teacher can also initiate LS teaching in the classroom. This is represented by arrows equal in size to the ones for the coach regarding LS. Student-athletes need to balance the demands of their sport and academics, which is often a great challenge. In a sport concentration program, the mission statement established by the administrators tends to combine both life-worlds in a perspective of holistic development of student-athletes, and sports coordinators are often responsible for its application. This adds

an actor rarely mentioned in studies but important to consider. For the parents, the investment in terms of time and money is substantial; therefore, some have high expectations in terms of sport performance. At first glance, this structure should be very favourable to LS teaching in the sport context and their transfer in the school context (or the reverse) because of the proximity of both contexts. Unfortunately, communications among the actors are often neglected, the two life-worlds working mostly independently, making it more difficult to attain a balance between performance and developmental outcomes.

CONDUCTING THE PARTICIPATORY ACTION RESEARCH

The first step was to decide which LS to prioritize. Following a team meeting with the school's principal, the sports coordinator, and a select group of coaches and teachers at the school, the following LS were targeted: (a) goal setting, (b) concentration, (c) healthy eating habits, (d) safe behaviours, and (e) physical and mental recovery. The school therefore wanted to work with the research team to implement a program that would help coaches and teachers learn how to teach student-athletes those specific LS and how to transfer them to the school context.

The second step was to assess what the actors involved in the project knew about each life skill and to identify their needs in this regard (cognitive structure). Thus, to assess student--athletes' needs, validated questionnaires regarding each life skill were put on a computer platform. To assess the coaches' and teachers' needs, an in-house questionnaire was designed to focus their concerns and perceptions on the student-athletes' needs regarding the selected LS. The data were compiled and considered for the program development.

The third step was to contact organizations outside the school (wider world) that are involved in sports, to discuss the project and consider their opinions. National and provincial organizations such as the National Sport Institute of Québec (*Institut national du sport du Québec*: INS-Q) and the Québec Student Sports Network (*Réseau du sport étudiant du Québec*: RSEQ) were contacted. These organizations' point of view was essential given their close involvement in coach training.

The fourth step was to find ways to present the material. Critical discussions, an intrinsic part of participatory action research (Kemmis, McTaggart, & Nixon, 2014), among the members of the research groups were rich with diverse perspectives based on various conceptions of learning.

The fifth step was to develop the material and determine how to make it accessible to each sport stakeholder of the school. The first contact with the actors was important to capture their attention and create a positive disjuncture (i.e., noticing and making sense). Therefore, meetings were planned to present the program and the platform. For every life skill (i.e., goal setting, concentration, healthy eating habits, physical and mental recovery, and safety behaviours) included in the program, different learning activities were designed using the constructivist approach proposed by Moon (2016) and Jarvis (2006) to help coaches and teachers ensure the learning and transferability of these skills. Educational activities and tools, such as workshops and videos, an online forum for coaches and teachers to share ideas, and reflective cards to help coaches and teachers reflect on how they teach and facilitate LS transfer, were developed. By consulting and using the material on the platform, the actors can have discussions using a common language and progressively change their cognitive structure (i.e., making meaning, transformative learning).

Although this project is still at the implementation stage, some challenges have been encountered, such as the busy schedule of the various actors of the school involved, as well as the importance of adapting the LS teaching and transfer program to the diverse types of sports (e.g., individual vs. collective, swimming vs. golf). Nonetheless, the fact that the various actors are being assembled to collaborate together and communicate effectively among themselves and the implementation of an innovate methodology offers a very promising avenue for LS teaching and transfer in the school sport context.

CONCLUSION

Without specific training courses/workshops on PYD/LS, some coaches have intuitively developed approaches that facilitate LS learning and transfer (e.g., Camiré et al., 2013; Gould et al., 2007; Sackett, & Gano-Overway, 2017). In an attempt to have more young athletes benefit from LS teaching, researchers have proposed various types of programs. Some are based on creating a new sport context (sport life-world) where (a) sport is used as a tool, (b) instructors are selected and well trained, and (c) the competitive aspect of sport is removed (e.g., Allen et al., 2015). Other programs aim to improve the coaching climate in organized and natural youth competitive sport contexts. Even if the latter programs are often delivered through short courses/workshops, they can have a positive impact if well structured. For example, Turnnidge and Côté (2017) developed the Transformational Coaching Workshop (TCW). This four-hour workshop contains learning activities that facilitate interactive discussions with other coaches, reflection, and opportunities to build social support networks. In sum, this workshop introduces coaches to PYD (noticing and making sense) and guides them to deepen their learning (making meaning, working with meaning, and transformative learning). In this chapter, we focused on LS teaching and transfer in youth competitive sport, especially high school sport and high school sport concentration programs. The constructivist view of learning made it obvious that the meaning of LS will always be negotiated among many actors, making the process more complex: “Holding a conception of knowledge as constructed does not make life easier but, in fact, complicates it because it means that everything is potentially questionable and, as a result, there are more areas of uncomfortable cognitive dissonance to be managed” (Moon, 2004a, p. 43).

We have used maps to better understand the learning environment involved in LS teaching and transfer (i.e., the specific sport and school contexts and the actors and their ongoing interactions). According to Wenger-Trayner’s (2013) vision of the nature of theorizing in the social sciences, these maps should be used not as an exact representation but rather as a tool to help “experience the familiar in a new way or to articulate our experience in a new way” (p. 2). Researchers have an important role in facilitating knowledge translation among practitioners and organizations (Holt et al., 2018). Furthermore, participatory action research is a promising methodology for helping coaches and other key stakeholders include LS teaching and transfer in various contexts.

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